Clinical Lectures
ON
SYPHILITIC DISEASE OF BONE.

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LECTURE II.

GENTLEMEN,—I may here remark with reference to the specimen we were examining during our last meeting that, in the sheath of bone surrounding this tibia and fibula, we discover, what in fact is the rule in all such cases (including syphilitic nodes), that the new bone is built up within the periosteum upon the same model as when formed from temporary cartilage. Within the fibres of the periosteum there are numerous particles of protoplasm, descendants of the contents of the temporary cartilage cells, whose office it is to form bone, and this protoplasm under certain nutritive abnormalities evidently produces an excessive growth of new bone. In truth, the periosteum is a form of fibro-cartilage, its minute anatomy being modified by vessels and so on; but the inherent tendencies of its round cells (osteoblasts) are under all circumstances the same as those of the medulla, and so we see in this sheath of newly-formed bone that from its deep surface, corresponding to the line of growing bone in cartilage, earthy matter is being secreted by the round cells contained in the part, and thus the hard osseous material of the new bone is produced. Some of the round cells subsequently form lacunæ or bone-corpuscles, the spaces between the lines of ossification becoming filled with vessels and medullary tissue, or, if ossification continues among the contents of these spaces, the medulla is converted into bone surrounding central vessels, and so a Harversian area is produced in the future bone.

It by no means always happens that periosteal growths, such as we see in this case, encircle the whole of the bone; they may assume a variety of forms, sometimes appearing as a ridge, at other times as a nodule of new bone; but the idea I wish particularly to force on your attention is that it does not follow because a syphilitic patient complains of deep-seated continuous pain in the extremities of one or more of the long bones, with a uniformly hard and swollen condition of the bone, that the part is necessarily the seat of ostitis, involving the structures contained in the cancellated tissues of the bone.

We have not, however, finished with this tibia. You will observe, in longitudinal section of the bone, that near the articular surface the cancellated tissue is occupied by a white cloudy material, very like that noticed in the cornea of persons suffering from interstitial keratitis, or the neoplastic formation observed in syphilitic retino-choroiditis. When examined under the microscope, we find that the cancelli of bone in the zone of cloudy material is occupied by ill-defined, soft-looking, nucleated cells, surrounded by fatty molecular matter. This material seems to be infiltrated among the normal elements of the medulla, and then to have spread in a circular form, after the fashion of the fairy ring which we frequently see on the grass of our meadows, and, like the fairy ring, the neoplastic formation we observe here has a tendency to disappear from one spot and appear in another. Nevertheless, with its disposition to wander from one spot to another, it has a persistent, I might almost say tenacious hold on the area infected by it. Month after month, and year after year, it is apt to recur in the neighbourhood first invaded, probably because it there meets with a fit soil in which to grow. As a rule, the neoplastic syphilitic formation which occurs in the cancellated tissue of bone, on account of its unabiding character, excites only transient hyperæmia in any one spot of the surrounding medulla. But the neoplastic formation sometimes appears to be stationary, and, by its presence, disturbs the nutrition of the structures among which it appears, and so becomes surrounded by a zone of congested vessels. These vessels run up to the border of the cloudy neoplasm, but they do not enter the new formation, and so a stationary zone of congested vessels encircles the neoplasm; and in consequence of this persistent vascularity of the part sclerosis of the trabeculæ contained in the congested zone takes place, and, further, the round cells of the medulla proceed to manufacture new bone, as I described to you in the case of the articular surface of this astragalus; and thus the syphilitic neoplasm becomes enclosed in a layer of dense new bone, which necessarily limits the blood-supply passing into the affected area, and consequently death or necrosis of the bone occupied by the cloudy syphilitic neoplasm occurs, without suppuration. Nor is it likely that new bone would replace that which dies, because the bone-producing elements of the medulla are, like the vessels, prevented from occupying the cavity left by the necrosed bone, being excluded from it by the layer of new and sclerosed osseous tissue formed in the manner mentioned above. The account I have given you of the pathological changes noticed in this specimen is the history of almost all instances of syphilitic ulceration and necrosis of bone. Cases of the kind are most commonly met with involving the bones of the skull, the abnormal action commencing in the diploe, and often only terminating in the removal of a portion of the skull, the cavity which is left remaining as a depression in the bone, surrounded by thickened and hard walls; but cases of syphilitic affections of the bone beginning in the medulla are rare, compared with instances of disease originating in the periosteum or external soft parts, and compromising the bone by cutting off its supply of blood which naturally passes to it through the periosteum. Syphilitic affections are in fact less frequently met with in the medulla than in the periosteum in proportion to the small quantity of connective tissue contained in the former structure as compared with the latter; and as evidence of this, with the exception of the woolly appearance presented by the contents of the cancellated tissue above noticed, which might be comprised in a spot equal to the circumference of a shilling, the whole of the medulla in the lower ends of this tibia and fibula is perfectly healthy—the diseased action has been entirely confined to the abnormal growth of bone from the periosteum; there the perverted action doubtless commenced, by the appearance of a soft opaque new formation, and this, altering the nutritive changes of the part, induced hyperæmia, and consequently increased osseous formation from the round cells contained in the part. But this light woolly neoplasm accurately represents to our minds the fact which clinical experience teaches us, which is, that in the early stages of syphilitic disease the abnormal action in the part might be overcome by appropriate treatment. We have no evidence whatever, either in this or any other specimen I have examined, in support of the idea that the adenoid tissues or the round cells of the medulla ever take a direct part in the initiative stage of syphilitic disease, and in this respect syphilis differs in a marked manner from tuberculous affections. Then, again, in syphilis the tendency is to the formation of new periosteal bone, or else to necrosis without suppuration or joint complications, whereas tuberculous disease frequently runs on into suppuration, the molecular disintegration of the part affected involving neighbouring joints. The greater number of syphilitic diseases of the bone are cured, if taken in time, by a judicious course of mercury and tonics; unfortunately we know of no specific for tuberculous affection of the osseous system.

The preceding remarks refer to instances of inherited syphilitic disease of the bones occurring among persons from about the age of fifteen to thirty, but we occasionally meet with cases of abnormal changes in the bones which manifest themselves soon after birth. The following is a case in point.

J. W——, aged two months, was sent with her mother into the Chadwick ward last October. The child since her birth had suffered from snuffles, and patches of roseola on her chest and back. She had eczema of the genital and anal regions, arising from the irritation produced by condylomata. We found that the bones of this child's forearms were enlarged above the wrist-joints; there were symmetrical nodular projections of bone above the olecranon processes, and similar excrescences were found on the outer condyles of the femurs (these were about the size of a split horse-bean); there was enlargement of the bone over the greater trochanter of the right femur, and on the same side

the lower end of the tibia and fibula were swollen just above the ankle-joint.

The child's mother was in good health; she had been married four years, and during that time had had a miscarriage; this was the first living child. Her husband had complained of pain in his bones, and had ulcers, as his wife called them, on his chest and legs. As the patient's parents were in good circumstances, I only kept the child in the hospital for a week, to demonstrate to you that even in the case of a young infant labouring under syphilis, a constant rise in the temperature occurs every evening. The patient was subsequently ordered to be brought as an out-patient, and directed to take five drops of the following mixture twice a day, in water:—Half a grain of bichloride of mercury, two drachms of iodide of potassium, and two ounces of water.

This treatment was continued for a month, when it was evident not only that the child had improved in health, but there was a diminution in the size of the swollen bones. I then ordered the medicine to be given three times a day for a month; it was subsequently gradually diminished in quantity. At present (six months after first seeing the child) she has lost all symptoms of syphilitic disease, and, although puny, is apparently thriving and in good health.

This is a typical instance of the course which this form of disease runs, provided it is brought under treatment in its early stages, and the child is well fed and cared for; but if the disease is neglected and the patient badly nourished, degenerative changes are apt to occur about the affected part, so that the epiphysis of the bone becomes separated from the diaphysis, and joint complications may supervene, ending in anchylosis of the joint, or even the death of the patient.

In early life the growth of the long bones is necessarily rapid. They consist of a shaft or diaphysis, and of certain smaller portions situated at each end of the shaft, but separated from it by an intermediate layer of cartilage; these are the epiphyses. The increase in the length of the bone is principally due to the growth of new bone, which occurs at the line of junction between the ends of the diaphysis and the adjacent cartilage. In this particular locality, therefore, the nutritive changes are more active than in any other portion of the bone, and it is precisely at this spot that marked degenerative alterations occur in infants suffering from inherited syphilitic disease of the bones. But in instances of the kind, the abnormal action is, I think, hardly confined to the ends of the diaphysis, for we meet with nodular swellings of the bones such as I have described; and, in addition, cases of the kind sometimes present circumscribed swellings over the frontal bones; and in most specimens, where there has been separation of the epiphysis from the diaphysis, the periosteum surrounding the affected part is more or less seriously implicated. So that it appears, from the clinical history and pathological changes observed in these cases, that the diseased action is marked at the extremities of the long bones, where nutritive changes are the most active; it is not, however, confined to the ends of the long bones, and does not manifest itself in the interior of those parts of the extremities of the bones which are not covered externally by the periosteum: the upper part and trochanters of the femur, for instance, may be involved in the diseased action, but the head and neck of the bone remain healthy. These facts seem to point to the conclusion we have arrived at with reference to the action of syphilis on the bones of adults, which is, that in by far the majority of cases the periosteum is the tissue primarily involved in the diseased action, the bone being implicated in consequence of the periosteal abnormalities.

The best specimen of this form of disease I have seen was lately exhibited by Mr. Warrington Haward, of St. George's Hospital, at the Pathological Society; and I have since, through the kindness of that gentleman, had drawings made of these bones. The changes occurring in the end of the diaphysis are well marked, the bone in this situation being separated from the cartilage; but it seems to me there is considerable abnormal ossification of the periosteum; in fact, a case of new bone is formed round some of the diseased epiphyses, very like that which we had seen enclosing the lower ends of the tibia and fibula in the instance of M. C—— described in my last lecture. And, knowing as we do that the vessels supplying the extremities of the rapidly-growing bones of infants pass through the periosteum, it naturally follows, if this latter structure is diseased, the supply of blood, in fact the nutrition of the epiphysis, must be compromised, and so it is very probable, as in this case, degenerative changes have occurred at the extremities of the diaphysis.

Dr. R. W. Taylor, of New York, has lately published a valuable treatise "On Syphilitic Lesions of the Osseous System in Infants and young Children." He gives the records of a considerable number of cases treated by himself and others, in some of which the separation of the epiphysis from the diaphysis was marked during life, and the lower part of the bone could readily be moved in the antero-posterior or lateral direction, independently of the movements of the joint. Crepitation was sometimes felt between the ends of the bone, but even in cases of this kind the parts may regain their normal functions, and the limb ultimately become a useful one.

It is possible, though instances of the kind must be very rare in which enlargements of the bones such as I have noted are the only symptom of infantile syphilis, for the characteristic feature of this affection is that it is accompanied with other well-marked syphilitic lesions; and it is thus hardly possible to mistake these for symptoms of rachitis or any other form of infantile bone disease. Moreover, rachitis is preceded by well-recognised symptoms, and seldom manifests itself until the patient is some six months old, when the soft patches felt over the occiput and the symmetrically enlarged extremities of the ribs are characteristic of the disease. A case of the kind might possibly be complicated with syphilis, but even in an instance of this description the coryza, eruptions, and mucous patches will indicate clearly the nature of the affection. Dr. Taylor believes that syphilitic epiphyseal affections may be confined to the phalanges and other bones of the hands and feet, but, in the absence of other evidence as to the existence of inherited syphilis, we might safely consider that instances of disease of the bones of this kind are generally due to tuberculous inflammation of the medulla.

In conclusion: however young the infant may be, having diagnosed the affection from which he suffers to be of syphilitic origin, we cannot commence a mercurial course of treatment too soon. Mercury is the drug, and the only means upon which we can safely depend for the cure of these cases.

ABSTRACT
OF A
Clinical Lecture
ON
CASES OF PLEURISY.

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AFTER speaking at some length of the physical signs of pleurisy, and comparing and contrasting them with those which indicate consolidation of the lung, Dr. Johnson went on to say: We have lately had under our observation a case of sero-sanguineous effusion into the cavity of the pleura of a somewhat unusual character, and the following is a brief outline of the patient's history:—

James G——, aged sixty-two, admitted Oct. 18th, 1877. He was for many years in the army, and had sunstroke and malarious fever in India. Latterly his occupation has been that of a "sandwich man," and with the exception of occasional slight returns of ague, he has had good health. Seven weeks before his admission he fell from a scaffold about fourteen feet high, upon his head and right side. He states that he was unconscious for about fifteen hours. When he recovered consciousness, he found that his forehead and scalp were cut and bruised, the right side of his neck was stiff; his breathing was difficult; he had pain on both sides of his chest, and he spat up a considerable quantity of blood. The day after the accident he went to a surgeon, who bandaged his chest; he then went home to bed, and remained there until the day of his admission into the hospital.

On admission (Oct. 18th) he complained of some pain in both sides of the chest. The breathing was short and difficult, especially on exertion. He had a dry cough. The temperature was normal. Physical signs: Chest large and barrel-shaped, with little movement of ribs on deep inspiration (emphysema). The whole of the right side was dull on percussion from base to apex, front and back, but the percussion note just below the clavicle was less dull than lower down. Absence of respiratory sounds and of vocal fremitus over the right side. A creaking friction-sound in the right infraclavicular region. Semicircumference of the chest on right side, 19 inches; on the left side, 18 inches. These signs indicated a copious liquid effusion into the right pleura, the only part where the pulmonary and costal pleuræ were in contact being just below the clavicle, where the percussion dulness was less marked, and where a friction-sound was heard.

Taking into consideration the duration of the symptoms, seven weeks, and the copiousness of the effusion, it seemed improbable that absorption of the liquid had gone on to any appreciable extent, or that it would be likely to occur. Meanwhile the lung was being injured by the pressure of liquid and the restraint exercised by false membranes. I therefore determined at my first visit on Oct. 22nd to have the fluid withdrawn immediately by the aspirator. With this object I sought the aid of my colleague, Mr. Henry Smith, who drew off seventy-seven ounces of liquid, which had all the appearance of being pure blood, but which was found to have a specific gravity no higher than 1022, and, on standing, only a small coagulum formed. The fluid, therefore, was serum, deeply coloured by an admixture of blood. After the operation the punctured wound was carefully closed.

The patient experienced an immediate sense of relief from the oppression of breathing, and the respiratory sound could at once be heard almost to the base of the lung, while the percussion-sound became normal, except over the lower part of the back.

On the 25th of October, three days after the operation, it was noted that a friction-sound was audible over the whole right side down to the very base. Now, under the circumstances, this friction-sound was of favourable import, inasmuch as it indicated that the surfaces of the pulmonary and costal pleuræ were in contact, and that no liquid was interposed even at the base of the lung. The dulness on percussion which remained below the right scapula is probably explained by a thick false membrane over the lower part of the lung. For some days, while the grating friction-sound was most distinct, he complained of pain below the right axilla and below the scapula, the pain being increased by a deep inspiration. This uneasy feeling in the chest is a common, though not a constant, result of the friction of the roughened surfaces of the pleuræ, when they first come again into contact after the removal of a liquid effusion either by absorption or by artificial means. The pain or uneasiness usually ceases when the cessation of the friction-sound indicates that the surfaces of the pleuræ have become adherent; and sometimes, as in this case, it ceases, while the friction-sound and fremitus continue. The friction-sound, probably, will soon cease; meanwhile he is up and moving easily about the ward, free from all pulmonary distress, and in a few days he will be able to leave the hospital.

The man could give us but an imperfect history of his accident and its immediate consequences. It is evident that the lung was bruised, if not torn. This is shown by the hæmoptysis and by the deeply blood-tinged liquid in the pleura, the admixture of blood-colouring matter being greater than I have ever seen it in any case of so-called "hæmorrhagic pleurisy." Were the lung and the pleura wounded by a broken rib? This may have been, though there is now no evidence of a rib having been broken. It is possible that, even without fracture of a rib, the lung and its investing serous membrane may have been bruised and torn by the forcible compression of the chest-walls under the influence of a heavy fall. Whatever opinion may be formed as to the exact etiology and pathology of this copious sanguineous effusion, we may, at any rate, congratulate ourselves and the patient upon the happy result of its prompt removal. If we had not resorted to the aspirator, the absorption of the fluid, if it took place at all, would have been very slow and probably incomplete, and the convalescence would have been protracted and imperfect.

WHY IS ORGANIC STRICTURE MOST COMMON IN THE BULBOUS PORTION OF THE URETHRA?

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THE question at the head of this paper appears not to have received the attention it demands, and this is the more remarkable as the answer to it has an important bearing on the prevention of the disease. There is certainly no better established fact than the great relative frequency of stricture in the posterior part of the spongy portion of the urethra. Sir Henry Thompson states[1] that among 270 preparations of stricture which he has examined, the narrowing was situated at the subpubic curvature in 67 per cent., and in the spongy portion of the urethra in front of this, as far forward as 2½ in. from the external meatus, in 16 per cent. He adds that behind the junction of the bulbous and membranous portions, "it probably never exists, except from some traumatic cause." Allowing for these few cases, we may therefore conclude that stricture occurs somewhere in the posterior four inches of the spongy urethra in about 80 per cent. of all cases.

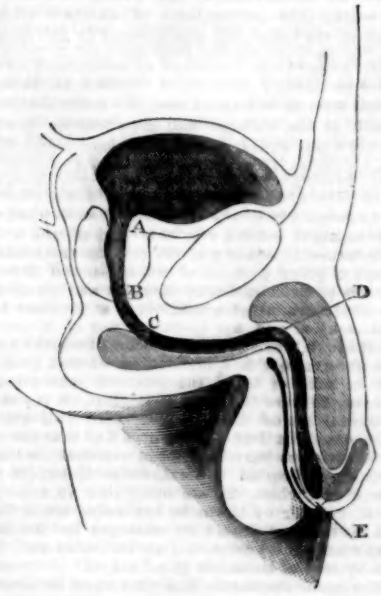
The causes of stricture in this part of the urethra are mainly two—(1) injury and (2) chronic urethritis. Sir H. Thompson gives[2] a table of 205 cases, and if we exclude those due to cicatrisation of chancres and phagedæna, and congenital cases, all of which occur at or close to the external meatus, and are therefore not of interest for the present inquiry, and also three cases of which the accuracy of the observations is questionable, we find that there are 192 cases left; of these 164 followed gonorrhœa, and the remaining 28 were due to injury. But, on the other hand, Mr. Bryant states[3] that in more than half his cases no definite cause could be obtained. I find that out of the 261 cases of stricture that have been recorded in the University College Hospital Reports, 1871–76, 195 (75 per cent.) followed gonorrhœa, 24 are attributed to injury, leaving only 42 (16 per cent.) to be otherwise accounted for—a result far different from that obtained by Mr. Bryant. I will now answer my original question as to strictures produced by each of these two great causes.

1. *Traumatic Stricture.*—The commonest stricture-producing injuries are falls astride beams or rails, or kicks; these, when severe, crush the urethra immediately over the part struck, or, if less violent, they may push the movable spongy urethra forwards and upwards over the oblique surface of the symphysis pubis, tearing it away from the fixed membranous portion, and rupture the urethra at a slight distance from the point struck, which is nearly always the perinæum under the bulb. In rare cases the cause is a punctured wound, and then the membranous urethra may be injured. The urethra may also be lacerated from within by the passage of foreign bodies, as calculi or instruments, in either case at the bulbo-membranous junction, on account of the narrowing of the canal at this situation. For these reasons injuries lead to stricture in the posterior part of the bulb in nearly all cases.

2. *Stricture from chronic urethritis.*—Urethritis almost invariably begins at the meatus externus, and spreads backwards towards the bladder, and it is, therefore, more common as well as more severe (acute) in the penile urethra, yet the induration resulting from it is most commonly found at the bulb! This seeming paradox has been thus explained by Sir H. Thompson:—"It is the prolonged existence of subacute inflammation ..... which is to be regarded as the cause of that deposit, in and beneath the mucous membrane, which, by its subsequent contraction, so commonly produces stricture."[4] M. Guérin explains it by the greater size and vascularity of the corpus spongiosum at the bulb than further forwards, leading to increased plastic effusion.[5] But it is evident that the indurated cicatrix-like

[1] Stricture of the Urethra. Third Edition.
[2] Op. cit.
[3] Practice of Surgery. Second Edition, p. 124.
[4] Op. cit., p. 107.
[5] Mémoires de la Société de Chirurgie. May, 1854.

tissue of a stricture is the product of a *chronic* and not of an *acute* inflammation, and while greater vascularity and nutritive activity lead to abundant effusion in acute inflammation, they, at the same time, predispose to rapid recovery, and it is the less vascular parts which are more especially prone to chronic indurating inflammations. Inflammation being essentially a lessening of the vitality of a part, a highly nourished tissue will more speedily recover itself. The other and much more frequent cause of chronic inflammation is a *long-continued irritation*. "In chronic inflammation, on the other hand, the causative force is found to be an irritation, acting not once, but repeatedly; or the irritant is not removed."[6] It would seem that an *unremoved irritant* is the real cause of the chronicity of urethritis at the bulb. A reference to the diagram



shows that we may readily divide the urethra into three parts: *superior vertical*, A to C, consisting of the prostatic and membranous portions; *horizontal*, C to D, the bulbous urethra; and *inferior vertical*, D to E, or penile urethra. C D is the seat of chronic urethritis. Now it is evident that any secretion from the lining membrane of A C will trickle down into C D, and that from D E will gravitate out of the urethra; while any secretion formed at or running into C D tends to lodge there, and acts as an *unremoved irritant* to the inflamed surface, and keeps up chronic inflammatory action. Of the fact of this retention of secretion there can be no doubt. Mr. Berkeley Hill, in his work on Syphilis and Local Contagious Disorders, says that a very characteristic sign of gleet of the deeper part of the urethra often escapes observation—namely, the appearance of little threads of clotted discharge in the urine. These clots are formed in the deeper parts of the urethra in the intervals of micturition. It is also a common experience that when no discharge appears on compressing the penile urethra, a few drops of glairy mucus escape when pressure is made on the urethra in the perineum; and it is well known that gleety matter comes at the *end* of micturition—i. e., when the ejaculator urinæ contracts spasmodically and empties the bulbous urethra. That the retained secretion is a source of irritation to the mucous membrane there can, I think, also be no doubt. It is well known that, removed from the urethra and applied elsewhere, it at once excites inflammation, and there is no reason to believe that an inflamed membrane is not irritated by its own products. Balanitis and posthitis often lead to the development of warts on the glans and prepuce, which is attributed to the irritant action of the inflammatory secretion. Retained bronchial secretion is held to be the cause of pneumonia in cases of obstruction of the bronchi.[7] We see in other situations the great advantage of the free escape of inflammatory products (apart altogether from the question of "tension"); for instance, in impetigo capitis, the most important of any local treatment is the removal of the crusts and the prevention of their formation. But a more analogous case is strumous ozæna. In this disease the inflammatory secretion thickens and dries on the surface, and then decomposes, causing the well-known fetor. So long as this continues, constitutional remedies have little or no effect; but add cleanliness to the use of tonics, &c., and remove this secretion as fast as it is formed, and the good effects will be at once apparent. The same principle must guide us in the treatment of urethritis, if we would avoid stricture. We must prevent the retention of irritating discharge, and this can only be done by frequently washing it away. Nature does this for us four or five times daily, but this is not enough; injections should be used, and used frequently. The success attending the use of injections depends principally upon the *frequency* and *efficiency* of their application, and very little upon the nature of the fluid used, provided it is unirritating. Whilst they are regarded merely as local astringent applications they will do but little good; their primary use is to secure *cleanliness*, and they fail entirely in their main purpose unless they free the canal from all secretion. Thus I have found a solution of boracic acid, or of chloride of zinc, one grain to the pint, very efficient, when used often and thoroughly. In the very chronic granular urethritis no doubt the application of a local astringent is useful, but the above remarks refer to the earlier stages of the inflammation. The patient should be directed to raise the organ against the abdomen to get rid of the peno-scrotal bend, and then inject the fluid slowly and steadily, forcing it back quite into the perineum, with his other hand. This should be done as often as possible—six to eight times a day. Frequent micturition should also be encouraged as tending to cleanliness, care being taken to render the urine unirritating by the administration of alkalies. It is interesting to note that stricture is said to occur more frequently in hot than in cold climates. May not this depend upon the less frequent micturition and more concentrated irritating urine in the former?

Gower-street, W.C.

[6] Wagner: Manual of General Pathology, p. 252.

[7] Irvine, Barlow, Greenfield.

TREATMENT OF NEUROSAL AFFECTIONS OF THE HEART.

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HAVING reviewed the treatment of primary affections of the heart,[1] and also that appropriate to the interesting class of cases denominated the secondary affections of the heart,[2] it is now fitting that the neurosal affections of the organ should be considered. These must be divided into several sections, each of which presents its own peculiar points of interest. It is of no slight importance in practice to discriminate betwixt organic disease and functional disturbance of the heart's action. In the one case there is a serious matter to deal with, and proper treatment may do much to prolong life, while inappropriate treatment may permit a valuable life to slip away prematurely. In the case of functional disturbance there is rather a distressing condition to be relieved, sometimes, however, so distressing as to render life a burden almost intolerable. A well-marked case of this last description will be given further on in this paper. There is usually no very great difficulty in discriminating betwixt organic lesions and neurosal affections of the heart in their well-marked phases; but there does exist considerable difficulty in dis-

[1] THE LANCET, May 22nd and 29th, 1875.

[2] THE LANCET, Sept. 25th and Oct. 9th, 1875.

tinguishing betwixt a purely neurosal condition and one where to considerable irritability is superadded a condition of incipient muscular failure—a combination far from uncommon. A still greater difficulty is experienced when there coexist actual organic disease and a neurosal condition as well; and it becomes no easy matter always to determine exactly the proportions of each factor in the case before one. In order to illustrate clearly what is meant I may refer to the case of a gentleman who consulted me some time ago, and who had double aortic disease, with much enlargement of his left ventricle. Here there were the signs and symptoms of actual organic disease. But in addition to these there was a general condition of irritability amounting to decided erethism, which was largely felt in the heart, and its action was readily disturbed on the least excitement. There was no very marked neurosal diathesis; but the gentleman, who was a teetotaler, indulged freely in tea, which no doubt aggravated his condition. In addition, however, to this he indulged freely in marital intercourse. When the question was put to him he seemed almost relieved in his mind, and readily admitted that such was the case, stating that he had himself observed how disturbing this had become.

Here was a case where actual organic disease was blended with a decided neurosal condition. In the management of such a case there were two factors to be considered, and to be carefully kept in view; there was the treatment appropriate to the aortic mischief, and the measures suitable to the neurosal condition engrafted upon it.

It is not necessary to say anything here about the first half of the treatment. It has been discussed in a previous paper; but it is desirable to consider the second half of the management of the case. In the first place, the actual disease, and, still more, the patient's knowledge of it, predisposed him to the consideration and observance of his own symptoms, as very naturally might be the case; so that there was a morbid mental condition in a man structurally diseased. This, of course, aggravated the neurosal symptoms, as we well know undue attention to any nervous disturbance will. Then there came the effects of undue indulgence in a certain direction. This is a very important matter in connexion with affections of the heart. An increasing experience shows this very distinctly. Not only is the excitement of coition often disturbing, even to healthy persons, but the generative expenditure forms a considerable tax upon an organism no longer in perfect integrity. It is not too much to say that a great deal of functional disturbance of the heart takes its origin in marital indulgence, and in this those who have had much experience either of heart disease or affections of the nervous system will bear me out. This is not merely amongst young men, but is found along with middle age. Much of the ill-health and of the "not-feeling-well" complained of by men who lead a quiet life amidst he most favourable surroundings is due to too great indulgence of the generative instinct. Doubtless, such indulgence is less destructive in every way than promiscuous intercourse with several persons; nevertheless, it has its consequences, and they are felt very decidedly by those who labour under affections of the heart.

In another case, also, of double aortic disease, in a young man, the same disturbing effects were felt. He was engaged to be married, and consulted me as to the propriety of matrimony; a strongly negative answer was all I felt justified in giving. In many cases of functional disturbance of the heart, the *fons et origo mali* will be found to be undue indulgence in the marital rights, and that, too, in persons who would at first sight seem the least likely people to suffer from such a cause.

When the cases present themselves where, along with actual organic disease of the heart, there is superadded a neurosal condition, it becomes very necessary to distinguish each factor in the case, and to adapt the treatment accordingly.

Being clear about this blended condition, it may now be expedient to consider the purely neurosal maladies of the heart. They consist, as said before, of several varieties. All, however, are characterised by the presence of certain symptoms, and the absence of others. There is not that marked effect of exertion in aggravating the symptoms which is found so largely—indeed, almost universally—in actual disease of the heart itself. There is not that clear association betwixt aggravation of the ordinary condition and times when a large and excessive quantity of excrementitious matter is present in the blood, which is found in secondary affections of the heart, and where accentuation of the aortic second sound is so marked a sign. On the other hand, there are positive symptoms, and these are of two kinds, usually seen alone, but occasionally blended. The first of these is the excited action, where the heart's impulse is strong, and the patient is conscious of the blows of the heart's apex against the thoracic walls. This constitutes what, in its more marked forms, is termed palpitation. But very commonly the excited action falls short of actual palpitation, though to palpation and to auscultation an excited action of the heart is distinct enough. When the patient is perturbed, or general excitement is present, the action of the heart becomes violent, and seems as if about to shatter off the front of the chest altogether. Such is the state in some cases of chorea, where the blows of the heart upon the thoracic parietes are very violent. Not rarely in cases where there is much excited action of the heart there are intervals when the heart seems to have stopped altogether, a state often causing great alarm. Such a condition is most commonly seen in women of middle age, and occurs most frequently in the night. Their complaint is, "I am not so afraid when the heart is beating hard, for then I know it is going; but when that stoppage comes on, and I cannot feel my heart beating at all, then I feel as if I was going to die;" and that such alarm should be felt somewhat keenly by a rather nervous lady in the still solitariness of her bedroom during the night is not a matter for any surprise. In these cases of excited action any exertion is apt to be followed by an attack of palpitation; and in this respect the case resembles one of primary disease of the heart but with a little care a diagnosis may be made correctly, even when both maladies are coexistent.

The other form of disturbance of the heart's action is that of irregularity, or intermittency. Here the heart beats quietly in ordinary circumstances, and the alteration of rhythm is the chief feature. Not rarely this condition is found mixed up with the excited action just described, but more frequently it is found alone. The nervous relations of cardiac intermittency have been well described by B. W. Richardson, F.R.S., to whom belongs the chief merit of having shown that intermittency is often a neurosal affection and entirely free from any connexion with organic disease. At the same time, however, marked intermittency is found along with grave and serious disease.[3] In many cases a distinct intermission of a beat will occur in a pulse otherwise equal and rhythmical, and when so associated is usually of no serious prognostic omen. Cases of such functional disturbance of the heart are too common to render it desirable that an illustrative case or cases should be given here. They would occupy too much of the space at my disposal.

(To be concluded.)

ON CERTAIN ABNORMAL MOVEMENTS IN THE MEMBRANA TYMPANI PRODUCING CEREBRAL SYMPTOMS.

BY LLEWELYN THOMAS, M.D.,
PHYSICIAN TO THE ROYAL ACADEMY OF MUSIC.

I HAVE selected the following case for report, as the gentleman was able to give a much more intelligent account of his sensations than is the case with most aural patients.

Mr. H. B——, aged forty-seven, but looking older, was sent to me for consultation by Mr. Male, of Victoria-park. He stated that he had been slightly deaf all his life, and had had painful gatherings in both ears in youth. Had had no acute pain for sixteen years, but occasionally discharges. Tinnitus, worst in the right ear, was always present, accompanied by irritation in the external meatus. His chief complaint is of a sensation as though "something had suddenly dropped or flapped in his right ear," and which at once appears to stop his hearing, block up his

[3] See a paper in the Deutschen Archiv für Klinische Medicin for 1876, by Professor Nothnagel, of Jena.

nose, and thicken his speech. Before examining him it occurred to me, from his opening remark, that he had possibly a movable naso-pharyngeal polypus.

He refers the sensation accurately to the situation of the tympanum, and states that it keeps constantly recurring for days, and then disappears for weeks without any apparent cause. His own words are, "It will suddenly fall and alter the whole tenor of my feelings at once, producing great mental depression." He is in the habit of removing the sensation by closing his nose and mouth, and making a strong *inspiratory* effort. He states that if he is reading aloud or speaking, and the flapping occurs, his voice at once becomes thick and blurred, as the voice of a drunken man. I imagined that this was only an altered perception of the sound of his own voice, but he asserts that his wife and friends notice the change immediately it happens. He suffers, in consequence, greatly from depression, which is much aggravated at the periods of the aural movements, and which is distinctly relieved by strong tea or alcohol. At such times he has a craving for stimulants, and, in fear of yielding to this temptation, he has wisely given up all spirits, &c. He has perpetually a feeling of weight at the vertex, and a general "sleepy sensation" in the head.

On examination the hearing distance in both ears was for my watch, which should be heard at ninety inches, half an inch, most distinct in the left; he also heard the tuning fork at about the same distance. The left membrane had evidently been the seat of repeated inflammations, and was thick and fleshy-looking, the malleus being undistinguishable. The right membrane was far more transparent, and on telling him to expire forcibly by Valsalva's method, the membrane was clearly seen to bulge out in two sections above and below the malleus, and he at once exclaimed that that was the sensation, though not precisely like that felt when it occurred spontaneously; on inspiring, the membrane fell back, apparently moving quite an appreciable distance. The impression given to the eye was like inflating and then exhausting a paper bag. No movements were visible, nor have they ever been felt in the left membrane. I am aware that such movements in a membrane weakened and thinned by repeated inflammations are by no means rare, as I have frequently noticed it before, though, as a rule, patients are not conscious of any unpleasant sensation. The membrane also frequently looks so thin and brittle, and the movement is so forcible, that I have been astonished that rupture has not taken place.

I ordered an inhalation of aldehyde to be forced into the tympana by Valsalva's method, and chloral and aconite drops to be placed in the meatus; and on a second visit at the end of a week I was pleased, and to a certain extent surprised, to hear my patient tell me that the hearing was better, that the tinnitus was less, and that the feeling of cerebral oppression was considerably removed. The movements in the membrane were again very marked, though the sensations had not occurred spontaneously during the week: the treatment by inhalation, with the internal administration of bromide of potassium on subsequent visits, proved so successful that I did not consider it necessary to perforate, as I had contemplated doing; the movements, however, never entirely disappeared.

The cerebral symptoms in this case are remarkable and probably depend upon some alteration in labyrinthine pressure, though it is difficult to determine in what way it is produced; it is reasonable to suppose that symptoms may be produced either by increased or diminished pressure. It should be noted that the unpleasant feeling is diminished by drawing the membrane inwards; the *hearing* might be expected to be improved by this process, as pressure on a relaxed membrane does improve the hearing power in some cases. Menière relates a case of a judge who habitually pressed a pin against the drum-head to enable him to hear: in this case pressure with a probe, and with an artificial membrane, produced no appreciable results. The rare condition of permanent patency of the Eustachian tube has some features slightly resembling those described here, and is also temporarily relieved by the inspiratory manœuvre. Sudden sensations of movement in the ear are often mentioned by patients, and are sometimes described as improving, and sometimes as impairing the hearing power; in many old-standing cases, especially of perforation, the patient knows some little trick by which he can temporarily improve his hearing; these examples vary, however, so remarkably, that it is extremely difficult to obtain from them really trustworthy insights into the physiology of the internal ear. In the somewhat rare instances of collection of serum in the tympanum, the movement of the fluid is sometimes felt by the patient, and can be seen by the surgeon; in such a case paracentesis should be performed. The foregoing is not a typical case of "auditory nerve vertigo," which is usually accompanied by a sensation of falling, or an actual fall, generally to the side opposite the ear affected. I have known persons in whom sneezing, or violently blowing the nose, produced giddiness, and even severe falls. This is owing to the sudden rush of air into the tympanum exerting undue pressure on the fenestra ovalis and thence on the labyrinth. The subject of ear disease in relation to cerebral symptoms is one of great interest to the physician as well as the aurist, as probably many cases of vertigo, so-called bilious attacks, confusion in the head, hypochondriasis, and even insanity, might be traced to some quite unsuspected ear affection. Dr. Gowers has recently published some papers on the diagnosis of auditory vertigo, with cases, the causes of which might well have passed undiscovered had not the physician been on the alert to discover obscure aural symptoms. Dr. Rhys Williams has also lately published in THE LANCET a most interesting case of actual mania dependent on aural disease, the cause of which was only discovered after some months' stay in the asylum, and which was *immediately cured* by an incision. Other instances could be cited in which deafness and tinnitus suddenly arose without any apparent cause, and within a few weeks the patients became maniacal. Dr. Hughlings Jackson considers that almost any kind of ear disease may cause paroxysms of vertigo and reeling, with faintness and vomiting.

Weymouth-street, W.

ON THE

LIMITATION OF FLUID IN THE FOOD AS AN AID TO THE TREATMENT OF SEROUS EFFUSIONS.

BY W. B. CHEADLE, M.D., F.R.C.P.,

PHYSICIAN TO THE HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET; SENIOR ASSISTANT-PHYSICIAN TO ST. MARY'S HOSPITAL.

(*Continued from p. 798.*)

CASE 3. *Ascites.*—Annie C——, aged nine, was admitted into the Alexandra ward of the Hospital for Sick Children, Oct. 30th, 1876. The history was that she had scarlet fever a year and a half previously, but no dropsy after, and recovered perfectly. She remained well until about eight months before admission, when she lost appetite, became thinner, and her stomach swelled slightly. She was then sent into the country, and improved, until the beginning of September, when she again lost appetite, the stomach began to swell, and she got thinner. She had had no cough or diarrhœa.

On examination, Nov. 1st, the abdomen was found to be distended, tense, tender, and dull, except for three fingers' breadth above the umbilicus, and fluctuation was marked. The liver was not enlarged, and nothing abnormal could be detected in it. The base of the right side of the chest was deficient in resonance to the fifth space, and the respiratory sounds were weak there. On the left side the heart was pushed upwards, the apex beating in the third space; the heart's sounds were clear. The temperature was 99·2°; tongue clean; urine, sp. gr. 1018, free from albumen. The treatment consisted in limiting the drink to ten ounces of milk, and half an ounce of mixture containing five minims of tincture of perchloride of iron, and two drachms of infusion of digitalis every six hours, making a total of 339·6 cc. of fluid swallowed in the twenty-four hours. This was continued for five days, during which period the average quantity of urine was 400 cc., as compared with an average of 365 cc., on unlimited drink for two days before

treatment was commenced. The quantity of fluid was now (Nov. 6th) further reduced to seven ounces of milk, and the digitalis mixture as before, making in all 254·7 cc. of fluid swallowed in the twenty-four hours. This was maintained for five days, and a calomel and jalap purge given, the average quantity of urine being 318 cc. No material change in the condition of the abdomen could be made out, but the girth was not accurately measured until the 8th, when it was found to be 24½ in. at the umbilicus during inspiration, and 24¼ in. during expiration.

On the 11th, a mixture of bitartrate of potash, spirit of juniper, and dedoction of scoparium every four hours, was substituted for the iron and digitalis every six hours, the same quantity of drink as before being allowed, raising the total to 283 cc. This change was followed by a fall in the quantity of urine next day, which persisted, giving a decline on the average for the fourteen days (Nov. 11th to Nov. 25th) for which it was continued to 277 cc. On the 18th the abdomen had diminished a quarter of an inch in girth, but fluctuation was still well marked in both flanks. A purge of calomel and jalap was now given, the mixture and restriction of drink being maintained as before. Three days later the abdomen had shrunk 1½ in. more. Some fluctuation could still be felt, but the abdomen was resonant, except in the right flank. The purge was now repeated (Nov. 22nd), and on the 25th the abdomen was found soft and flaccid, and fully resonant everywhere, and no fluctuation could be detected. The measurements at the umbilicus were 22¾ in. and 23¼ in. during expiration and inspiration respectively. The amount of drink was now raised to 20 oz.+3 oz. of mixture, or a total of 650·9 cc. The average of urine for the three days this was continued being 443 cc. On the 29th the mixture of iron and quinine was substituted for the diuretic, making the total fluid swallowed 597·3 cc., the average of urine rising to 576 cc. for five days. On the 19th the child was transferred to the Convalescent Hospital free from any sign of the disease.

TABLES SHOWING THE TREATMENT PURSUED AND THE RELATION BETWEEN THE AMOUNT OF FLUID TAKEN IN AS DRINK, AND THE QUANTITY EXCRETED IN THE URINE, IN THE CASE OF ANNIE C——.

I.—*First period of three days. Drink not restricted. No medicines given. Bowels open daily in normal manner.*

Date.	Cubic centimetres of fluid taken in preceding 24 hours.	Cubic centimetres of urine passed in preceding 24 hours.
October 30th	Not estimated	Not estimated
„ 31st	„	320
November 1st	„	410

Average daily quantity of urine passed for two days before drink was restricted, 365 cc.

II.—*Second period, comprising five days. Drink restricted to ten ounces of milk and two ounces of mixture, or twelve ounces in all = 339·6 cc. Drugs given: five minims of tincture of perchloride of iron, two drachms of infusion of digitalis, and two drachms of water, every four hours. Bowels open regularly in normal manner.*

Date.	Cubic centimetres of fluid taken in preceding 24 hours.	Cubic centimetres of urine passed in preceding 24 hours.
November 2nd	339·6	420
„ 3rd	339·6	330
„ 4th	339·6	420
„ 5th	339·6	430
„ 6th	339·6	400

Average daily quantity of urine passed for five days on 339·6 cc. of drink = 400 cc. Average daily excess of outflow by urine over inflow by drink = 60·4 cc.

III.—*Third period, comprising five days. Drink restricted to seven ounces of milk and two ounces of mixture, or nine ounces in all = 254·7 cc. Drugs given: the iron and digitalis mixture as before, and on the 8th a purge of calomel and jalap, which opened the bowels twice freely. On the remaining days the bowels were open in normal manner.*

Date.	Cubic centimetres of fluid taken in preceding 24 hours.	Cubic centimetres of urine passed in preceding 24 hours.
November 7th	254·7	320
„ 8th	254·7	340
„ 9th	254·7	310
„ 10th	254·7	320
„ 11th	254·7	300

Average daily quantity of urine passed for five days on 254·7 cc. of drink = 318 cc. Average daily excess of outflow by urine over inflow by drink = 63·3 cc.

IV.—*Fourth period, comprising fourteen days. Drink restricted to seven ounces of milk and three ounces of mixture, or ten ounces in all = 283 cc. Drugs given: five grains of bitartrate of potash, ten minims of compound spirit of juniper, and half an ounce of decoction of scoparium, every four hours. On the 22nd the calomel and jalap powder given previously was repeated. The bowels were open normally, except on the 22nd, when they did not act, and on the 23rd, when they were loosely moved twice after the powder.*

Date.	Cubic centimetres of fluid taken in preceding 24 hours.	Cubic centimetres of urine passed in preceding 24 hours.
November 12th	283	240
„ 13th	283	270
„ 14th	283	280
„ 15th	283	190
„ 16th	283	300
„ 17th	283	270
„ 18th	283	330
„ 19th	283	300
„ 20th	283	210
„ 21st	283	330
„ 22nd	283	320
„ 23rd	283	250
„ 24th	283	300
„ 25th	283	280

Average daily quantity of urine passed for fourteen days on 283 cc. of drink = 276·4 cc. Average daily excess of inflow by drink over outflow by urine = 6·6 cc.

V.—*Fifth period, comprising three days. Drink increased to twenty ounces of milk and three ounces of mixture, or twenty-three ounces in all = 650·9 cc. Drugs given: same as before. Bowels open normally.*

Date.	Cubic centimetres of fluid taken in preceding 24 hours.	Cubic centimetres of urine passed in preceding 24 hours.
November 26th	650·9	350
„ 27th	650·9	450
„ 28th	650·9	530

Average daily quantity of urine passed for three days on 650·9 cc. of drink = 443·3 cc. Average daily excess of inflow by drink over outflow by urine = 207·6 cc.

VI.—*Sixth period, comprising six days. Drink restricted to twenty ounces of milk + nine drachms of mixture = 597·7 cc. Drugs given: three drachms of quinine-and-iron mixture three times a day. Bowels open in normal manner.*

Date.	Cubic centimetres of fluid taken in preceding 24 hours.	Cubic centimetres of urine passed in preceding 24 hours.
November 29th	597·7	580
,, 30th	597·7	Not estimated.
December 1st	597·7	500
,, 2nd	597·7	660
,, 3rd	597·7	450
,, 4th	597·7	690

Average daily quantity of urine passed for five days (measurement being accidentally omitted one day) on 597·7 cc. of drink = 576 cc. Average daily excess of inflow by drink over outflow by urine = 21·7 cc.

The preceding was one of a curious group of cases which I have met with occasionally in children, characterised by effusion into the peritoneal cavity, with gradual reabsorption of the fluid, and recovery after a protracted period. The causes of the dropsy are, to my mind, still a matter of doubt; it is usually attributed to tubercular peritonitis, sometimes to portal obstruction, and sometimes to malarial influence. In the present case the definite commencement of the illness, with the absence of any sign of hepatic lesion, would seem to indicate a subacute inflammatory affection of the peritoneum, probably of a simple and not tubercular character. But, whatever the cause, a large quantity of fluid had accumulated in the abdominal cavity, and this entirely disappeared in the course of twenty-seven days. The process of reabsorption was less rapid than in the preceding cases, but it is in accordance with my experience that dropsies of the peritoneum are, as a rule, more slowly removed than those of the pleura or the cellular tissue.

It will be seen from the table that the restriction of drink to twelve ounces was followed by an increase in the quantity of urine compared with the average amount for two days previously on an unlimited supply of drink. The relation between the inflow and outflow was, moreover, reversed, the latter being on an average 64·4 cc. in *excess* of the former, instead of the usual deficiency of 200 cc. In the present case the difference was probably still greater, for if the child drank the low average quantity of thirty ounces = 849 cc. when unrestricted, the average flow of urine being only 365 cc., the deficiency of outflow as compared with inflow would be no less than 484 cc. But taking merely the average amount of 200 cc. deficiency, the gain in drainage by urine after the restriction would be not less than 264 cc. It must be remarked that this result was coincident with the administration of digitalis, and was probably largely due to the influence of the drug.

The further reduction of drink caused a fall in the quantity of urine, but the relation between inflow and outflow remained almost unchanged, the excess of the latter, on an average for five days, being 63·3 cc., as compared with 60·4 for the previous five days. The substitution of a mixture of bitartrate of potash and scoparium for the digitalis and iron was, however, followed by an immediate and persistent diminution in the gross amount of urine, and also by a distinct loss of drainage—the excess of outflow over inflow falling to an average of only 6·6 cc.; and this coincidence, taken with the preceding coincidence of an increase of drainage with the administration of digitalis, is very striking and significant. Throughout, however, as in the preceding cases, the proportion of fluid excreted to fluid swallowed was greater than under ordinary conditions, and this reached its highest point in the present instance—i.e., the drainage was greatest—when drink was reduced to the lowest amounts, the results being almost identical for twelve and nine ounces.

(To be concluded.)

VACCINATION GRANT.—Dr. Davies, of Wrexham, has received an award of £82 17s. for efficient vaccination in his district.

INTRACRANIAL SARCOMATOUS TUMOUR IN CONNEXION WITH THE AUDITORY NERVE.

BY GEORGE P. FIELD,
AURAL SURGEON TO ST. MARY'S HOSPITAL.

E. J——, aged twenty-nine, was admitted into St. Mary's Hospital January 29th, 1877, under Dr. Broadbent's care. History imperfect. Has suffered from pain in the head and vomiting, and recently vision has been failing. Complains of her head throbbing; says that she saw very little yesterday, and cannot see at all to-day. Has great trouble in swallowing. Is very deaf and slow to answer. Food trickles from corner of mouth. Pulse 75, feeble; temperature 97·5°. Is sick at times. Bowels open. Ordered a drachm and a half of solution of perchloride of mercury in an ounce of camphorated water three times a day.

February 3rd.—Rather better. Can see a little. Pain in the forehead; giddy. Marked paralysis of right side of face, and impairment of power in right limbs. Sensation about the same on the two sides. On ophthalmoscopic examination double optic neuritis was seen to be present in an advanced stage, with consecutive atrophy.

It was difficult to determine whether the deafness was due to defect in the auditory apparatus or to hebetude, and impossible to say which ear was the worse.

5th.—At 5 P.M. yesterday she became unconscious a short time. Made a roaring noise in the throat. Right leg drawn up. Right arm flexed and hand clenched. Right extremities generally rigid. Frothed at mouth.

6th.—Fingers of right hand contracted. Sensation equal in both hands and on both sides of face and trunk. Tongue deflected to right side more than usual. Food clinging to the teeth. Left eye turned further inwards. Slept well. Complains that she cannot see at all. Pulse 76; temperature 98·2°. Facial paralysis increased.

When the patient was made to walk it was seen that there was not merely dragging of the right leg, but a want of control over both lower extremities, and a vagueness in their movements highly suggestive of disease in the cerebellum. The cross-paralysis—namely, of the sixth nerve on the left side and of the face and limbs on the right side—appeared to localise the cause as affecting the left side of the pons, and the ataxy of the lower limbs showed the cerebellum to be interfered with. The concurrence of pain in the head, vomiting, and double optic neuritis pointed to tumour as the probable disease; but it was difficult to understand how a tumour outside the pons should compress only the sixth nerve; and, had the morbid condition been in the pons, it could scarcely affect the nucleus of the sixth nerve without involving that of the seventh.

9th.—Rather better, but drowsy. Winks if a finger be put near the right eye, but the left eye may be almost touched without causing winking.

12th.—About 11 A.M., she had a fit, with gurgling in the throat; was unconscious about ten minutes; about 4 P.M. a second similar attack, lasting about the same time, occurred; about 7 P.M. a third similar fit. Skin cold during fits. Deafness increased; sleeps at night; cannot grasp with the right hand.

15th.—Looks better; complains of pain in the forehead, and is still more deaf; food and saliva hanging about lips and teeth. Temperature 98°.

19th.—Last night fell into a torpid state at 6 P.M., and continued so until 4 A.M. About 11 A.M. she fell into a similar condition; lies on her back, with her mouth open; up and down movement of tongue; not roused by touching eyeballs; limbs extended; pulse 86, regular. About 9 P.M. she fell into the same kind of stupor till 4 A.M., and remained in a drowsy state; much more deaf; passes motions unconsciously; right hand almost powerless; articulation indistinct.

21st.—Has not been torpid again; answers slowly; urine cloudy, sp. gr. 1031; face swollen, more especially on right side, but no pain in it.

March 1st.—Pulse 61; face very red; very deaf; irregular movement of fingers of left hand; temperature 97°; diarrhœa; urine contains mucus, sp. gr. 1024.

6th.—No diarrhœa; same condition as before, but rather less deaf.

8th.—Dark red patches under both eyes; mouth rather more deflected to right side.

13th.—Not so well.

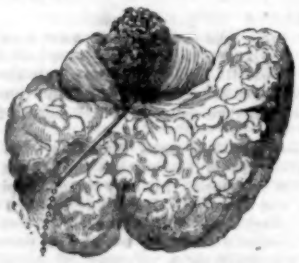
19th.—Torpid and semi-conscious; raves for her meals; breathing rather stertorous.

23rd.—Does not answer questions; passes motions in bed; left eyeball kept closed; right eye half open.

April 17th.—For the last month has remained very much in the same condition; she is quite blind and very deaf; cries out violently for food at stated intervals; the whole fundus of both eyes slaty in colour; the intellectual function is destroyed. On April 29th she died.

At the post-mortem examination, which was carefully made by Dr. Mahomed, a tumour of the size of a Maltese orange was found attached to the posterior surface of the right petrous bone,[1] just above the internal meatus. It was

PLATE I.



fissured and corrugated on its surface, like the cerebellum, and was of soft sarcomatous structure, not unlike brain-tissue on section. The upper margin of the medulla formed its posterior boundary. On examination of the petrous bone, the tumour was found to spring from the internal auditory meatus, taking origin apparently from the dura mater lining the meatus, and unsheathing the auditory nerve. The tumour did not extend into the meatus. On

PLATE II.

microscopic examination the tumour proved to be a sarcoma. It consists of round-celled sarcomatous tissue (granulation sarcoma), which tends to arrange itself in whorls, in the centre of which bloodvessels are generally found. The contents of some of these spaces could not be distinctly made out; they much resembled "giant cells." The tumour is very vascular; the vessels, however, have not thick walls. It presents the appearance of a tumour of moderately rapid growth, not so quick as in the case of most malignant growths, nor so slow as many benign ones.

Remarks.—This case is of interest both from its clinical and pathological aspects. I have recorded it chiefly on account of its value as a rare lesion in connexion with the auditory nerve. When it came under observation the symptoms were too far advanced for a diagnosis of its exact origin to be possible. Dr. Hughlings Jackson has remarked that deafness is a very rare symptom of intracranial disease, unless associated with a lesion of the organ of hearing; and Roosa, in an exhaustive summary (which includes also the experience of Toynbee) of the causes of so-called nervous deafness, only mentions one case of tumour of the auditory nerve, which occurred in a deaf-mute, and was recorded by Duverney, and of this case, moreover, no details are given.

Lower Seymour-street.

[1] These pathological specimens were exhibited at the annual museum of the British Medical Association at Manchester, and thus described in the Catalogue:—Plate I. A cerebral tumour, which took origin from the process of dura mater unsheathing the right auditory nerve. It had compressed so as to completely flatten out, and apparently destroy, the right half of the pons Varolii, and also the right crus. It also compressed the right middle peduncle of the cerebellum. It consists of round-celled sarcomatous tissue—granulation sarcoma.—Plate II. Petrous bone, showing origin of the above tumour. It springs from the internal auditory meatus, taking origin apparently from the dura mater lining the meatus, and unsheathing the auditory nerve.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

KING'S COLLEGE HOSPITAL.

CASE OF STRANGULATED FEMORAL HERNIA; RELIEF AND RADICAL CURE BY OPERATION.

(Under the care of Professor WOOD.)

For the notes of the following case we are indebted to Mr. Edward Ground, surgical registrar.

H. S——, aged fifty years, a widow, was admitted on Saturday, Oct. 27th, 1877, suffering from strangulated femoral hernia on the left side. About five years previously she noticed a small swelling in the left groin. This caused no pain or inconvenience, but gradually increased in size, and never disappeared entirely. She never wore a truss for it. Two days before admission she was seized with intense pain about the region of the hernia and abdomen, followed soon afterwards by vomiting of bilious matters. For ten days before admission she had passed nothing by the bowels.

On admission, she complained of intense pain in the left groin and left iliac region; the pulse was rapid and feeble; face dusky; eyes sunken; tongue brown and dry; vomiting occurred occasionally, being readily excited by the introduction into the stomach of any substances, such as milk or beef-tea; the vomited matters never became stercoraceous; constipation was complete, purgatives given by the mouth and copious enemata producing no result. On examining the left groin an elongated swelling, irregular in outline, and about the size of a hen's egg, was found, commencing about one inch below Poupart's ligament, internal to the femoral vessels, and external to the pubic spine on that side, and extending upwards and outwards over Poupart's ligament. This was hard, lobulated, and elastic, with a total absence of any impulse on coughing. Percussion produced a dull note over the greater part of the tumour.

The patient was placed under the influence of chloroform, and the taxis, combined with involution of the patient, applied by Mr. Wood, but without causing reduction. An incision was then made about three inches in length, commencing below, over the neck of the hernia, and carried upwards and outwards over its body. The various coverings of the hernia were divided, and the sac opened. The hernia consisted chiefly of omentum, but a knuckle of chocolate-coloured intestine was found strangulated in the crural canal, behind the mass of omentum. Gimbernat's ligament having been divided upwards and inwards for about two lines, the intestine was drawn down and examined, but, being free from ulceration or gangrene, was returned into the abdominal cavity. The omentum external to the crural canal was then cautiously cut with blunt scissors, and the bloodvessels ligatured separately. The stump of the omental mass was left in the crural canal, and tucked into the opening through which the bowel had descended. Mr. Wood then passed the left index finger into the crural canal, pushing before it the stump of omentum, and lifting up

Poupart's ligament on the end of the finger. A curved needle, mounted on a handle and with an eye at the point, was then passed in at the lower margin of the incision, through the posterior layer of the sac, the pubic portion of fascia lata, Gimbernat's and Poupart's ligament, and brought out at the upper margin of the incision. A thick silver wire was then hooked on to the eye of the needle, and the latter withdrawn, the wire being left in the wound. The finger was again passed into the crural canal, the needle passed along its outer border and through the omentum and Poupart's ligament, the point being again brought out at the upper extremity of the incision. The opposite end of the wire was then attached to the needle, and the latter withdrawn and unhooked. The wire was thus made to pass through Gimbernat's and Poupart's ligament, and through the hernial sac, enclosing the cut end of the omentum. The ends of the wire were then twisted to the extent of three turns, and brought out of the wound with the ligature of the omental vessels. The whole of the hernial sac was then removed with a pair of scissors at a point immediately below the level of the wire ligature. The wound was then well washed with carbolic lotion, a drainage-tube placed in the lower angle, and the edges brought together with silk sutures. Since the operation the patient has rapidly become convalescent, without having a single unpleasant symptom. The vomiting speedily subsided, and the bowels were freely opened on the evening of the day of operation.

Very little suppuration occurred, and three weeks after admission the patient was discharged with the wound entirely healed, and with a resistance to the cough impulse so firm that no support from a truss was deemed needful.

UNIVERSITY COLLEGE HOSPITAL.

THREE CASES OF CONGENITAL FISTULA OF THE NECK.

(Under the care of Mr. BERKELEY HILL.)

NOT more than sixty cases of congenital fistula of the neck have been recorded, and of these only three or four are by English surgeons.

CASE 1.—In January, 1873, C. R. E——, a boy of four years and a half old, was admitted for treatment. The child was pale and thin, but not otherwise ill-grown, free from defect of the external ears, or of hearing, or of deformity of the face. Soon after birth a little point or stitch was observed in the skin in front of the neck. At three months old fluid escaped for the first time from this point. On one occasion a small quantity of milk-like fluid was discharged while the child was sucking, and after this the dress would be stained from time to time by the oozing of a drop of matter. Later on, the intervals between the oozing lengthened, and a small swelling collected, which terminated by the escape of a teaspoonful of thin matter. This happened about once a month. The child was an only one. His parents had not this defect, but his father's uncle had a similar occasional discharge from the right side of his neck till his death, at sixty-two years of age.

Three-quarters of an inch above the sternal notch, at the inner margin of the right sterno-mastoid muscle, there was a white dot as large as a small pin's head. During deglutition the dot was drawn up into a funnel-shaped depression. The skin was not altered in colour, though covered for a short distance by a thin crust of dried discharge. Pressure above the point drove out a drop of puriform fluid. There was no such mark at the left side of the neck. Above the point a small oval elastic mass could be felt, lying on the right of the mesial line. Under chloroform the fistula and swelling were explored. A probe was passed along the neck upwards and beneath the angle of the jaw till the end could be felt just behind the root of the tongue by the finger within the mouth on the right side. With the expectation of exciting inflammatory adhesion of the walls of the fistula, its orifice was incised, and a gilt wire spiral drainage tube was inserted as high as the upper end of the fistula. This was worn without discomfort for a week or two, but after its removal the fistula regained much of its previous condition. Injections of sapid and coloured liquids into the fistula were made on several occasions, but none were ever detected in the mouth. No coughing or choking ever accompanied these explorations.

CASE 2.—Anne S——, aged fifteen years, was admitted into University College Hospital in November, 1872, having been sent to Mr. Hill by Mr. Hickman, of Dorset-square. She was the eldest of seven, and was the only one of the family who had this defect. The others were well-born and healthy. There was no hereditary history. The external ears were well formed, and there was no deafness. When five years old a little swelling, as large as a pea, was noticed in the middle line of the neck near the thyroid cartilage. This gradually increased to the size of a marble, and the child was under the care of various surgeons, being first treated by embrocation, then cut, and the cavity irritated with plugs of wood. The fistula still remained open.

On admission a scar existed over the larynx in the mesial line, with a small sinus leading along the left side of the thyroid cartilage. Deglutition carried up the scar, and a little clear fluid escaped from the fistula every time the child ate. Various attempts were made to pass fine probe bristles, in order to demonstrate the length of the fistula, but none could be introduced for more than half an inch. [Shortly before admission the patient was under the care of Mr. Pugin Thornton, who succeeded in passing a fine probe as far as the angle of the jaw, but never into the pharynx]. There was no cartilaginous lamella along the track of the fistula. Air never escaped from the orifice, and the appearance of the discharge was not altered during the menstrual periods.

CASE 3.—R. W——, aged fifty-nine, was under treatment for stricture of the urethra from Sept. 5th, 1874, to Oct. 22nd, 1874. During his stay in the hospital the fistula of the neck was detected. He was well-grown and vigorous, but had hypospadias. There was no history of a similar defect among seven brothers, ten sisters, parents, or other relatives; no deafness or external deformity of the ears. This opening had been there all his life, but nothing had been done for it. He had noticed a line resembling a quill, running upwards across the neck for about three inches, and occasionally he had found that a scanty discharge, sometimes watery, sometimes milky, escaped or could be squeezed out.

There was a slight depression, without discolouration of skin, about the size of half a pea, half an inch above the sternum, and as much to the left of the middle line, at the inner side of the sterno-mastoid muscle. The depression looked outwards. At the inner side of the fovea was a minute orifice through which a fine bougie could be introduced if the skin was tightened downwards, and passed five inches and a half under the skin and along the inner border of the sterno-mastoid muscle. Probably it would have gone further, but the patient disliked these explorations, and resisted further introduction, though he acknowledged the probe caused no pain, coughing, or tickling. Injection of infusion of quassia caused no bitter taste in the mouth. The discharge was slightly albuminous, and contained scaly epithelium, oil-globules, pus- and lymph-corpuscles.

These cases of congenital fistula of the neck illustrate in some degree that part of Sir James Paget's paper (read to the Medico-Chirurgical Society on Nov. 28th) on congenital deformities of the ear and neck, due to imperfect closure of the branchial fissures. They form an addition to the small number of cases of this imperfect development of the human subject hitherto recorded in this country.

LIVERPOOL INFIRMARY FOR CHILDREN.

FOREIGN BODY IN THE BRONCHUS, REMOVED AFTER TRACHEOTOMY, IN A BOY AGED SIX YEARS.

(Under the care of Dr. MARTIN OXLEY.)

JAMES G——, aged six years, was admitted on Feb. 21st, 1876. The mother stated "that five months ago, when in Ireland, while he was eating damsons, one of the stones was sucked into the trachea. He immediately became livid and unable to breathe. After a short time he recovered his breath, and was taken to a hospital in Dublin, where instruments were used, but without doing him any service. Soon he began to spit small quantities of bright blood; this continued at intervals till six weeks ago." He had several attacks of bronchitis after the accident, and was under treatment for this complaint up to the time he was admitted into the infirmary. The child always persisted in

the statement that the stone was in his chest. During the whole time he had had a peculiar choking cough, but previously to the accident he had been a very healthy child.

On admission, he was suffering from acute capillary bronchitis; respiration 48; pulse 160; temperature 102°; lips and face cyanotic; percussion-note clear over both sides. Air entered both lungs equally, and nothing peculiar was noticed except the cough, which was suffocative, commencing like an ordinary cough, but ending abruptly, the child at the time throwing forward his head, and making an attempt to vomit.

Repeated and careful examinations of the chest failed to detect any symptoms of a foreign body in the air-passages until the 6th March, when, on examining the chest, it was found that little or no air entered the right lung, although the percussion-note was quite clear on this side. This was deemed sufficient evidence to warrant the performance of tracheotomy, with the hope of relieving the patient, as a foreign body was evidently blocking up the right bronchus. On March 7th Mr. Rawdon performed tracheotomy, making a large opening rather low down. About a teaspoonful was coughed up, and after two or three expirations the stone appeared in the wound, and was easily removed. It was perfectly smooth and not coated in any way, and the usual size of a damson-stone. The boy did very well, and on the 15th April was quite recovered.

It may seem that too long a time elapsed before attempting to remove the stone; but if reference is made to the case of Mr. Brunel, it will be found that although it was perfectly certain that the half-sovereign was freely movable in his trachea, it remained there from the 3rd April until the 13th May. In that case the trachea was opened on the 27th April, and it was not until the 13th May—more than two weeks afterwards—that the coin came away, and then it did not pass through the artificial opening, but through the glottis. It is interesting to note that the child always maintained that there was something in the chest.

ROYAL INFIRMARY, EDINBURGH.

EXCISION OF A LARGE BRONCHOCELE.

(Under the care of Prof. SPENCE.)

For the following interesting notes we are indebted to Mr. T. F. Chavasse, M.B.

M. N——, aged thirteen, factory-girl, was admitted on September 21st, 1877, for dyspnœa, caused by an enlargement of the thyroid gland. An increase in the size of the neck was first noticed three years previously. Iodine, blisters, and many remedies to check this growth, had been ineffectually tried.

On admission the cervical region was found to be occupied by a prominent tumour. The circumference of the neck, midway between the chin and the sternum, was fifteen inches and a half. In the middle line, the isthmus of the thyroid gland was found to extend from the episternal notch to the thyro-hyoid ligament; and at this spot, lying upon the surface of the ligament, and reaching to the body of the hyoid bone, there was a distinct lobulated piece of the gland. The consistence of the goitre in this situation was moderately firm, but not absolutely hard. A faint venous hum was readily distinguishable, but was somewhat obscured by the loud tubular breathing. There was a distinct pulsation communicated to the hand. The skin over the tumour was movable, and there was a certain degree of movement with the tracheal rise and fall. Laterally, the right half of the neck contained a larger proportion of the growth than the left. The horizontal rami of the inferior maxilla were reached on each side, but not overlapped. Lines, drawn from the mastoid processes of the temporal bones on each side to the middle thirds of the clavicles marked the external limit of the gland. The consistence of the bronchocele laterally was much firmer than in the central line, but the middle and lateral portions did not admit of isolation. The carotid arteries beat external to the lateral masses. Respiration was audible, and became laboured on the slightest exertion. Auscultation revealed sonorous rhonchi in both lungs during a forced inspiration. A distinct thrill was imparted to the hand when placed over the præcordia. The first cardiac sound at apex was somewhat thumping, but there was no distinct murmur. The second sound, both in the pulmonary and aortic areas, in the former especially, was accentuated. The pupils of both eyes were more dilated than normal, but contracted to a strong light. There was no exophthalmos, and nothing abnormal was revealed by the ophthalmoscope. Urine normal. Patient had never menstruated.

As the bronchocele was increasing in size, and the patient and her parents were anxious that something should be done, on Sept. 28th Professor Spence, with the assistance of Dr. P. H. Watson and Dr. J. Duncan, proceeded to remove the enlarged thyroid gland. An incision was made in the median line, extending from within half an inch of the symphysis of the jaw to the episternal notch. At a later stage of the operation, from the lateral situation of the tumour, it was found necessary to make two lateral cuts, one on each side from the median line, parallel to, but an inch below, the horizontal rami of the inferior maxilla, as far forwards as the course of the facial arteries, where they terminated. After the division of the skin and subcutaneous tissues, numerous large veins were brought into view; these, after being carefully tied, were divided. The capsule of the gland having been exposed, that piece of the thyroid body lying upon the thyro-hyoid ligament was strangulated with a carbolised silk ligature and then taken away. The sterno-hyoid, sterno-thyroid, and omo-hyoid muscles were found tightly stretched, running over the surface of the gland, and it was found necessary to divide them. The four angles of the bronchocele were next secured, each by a double ligature of strong carbolised silk, by means of a very large aneurism needle made for the purpose. This having been accomplished, a double ligature was passed between the isthmus of the gland and the trachea, and, having been tightly tied, a division was made with the knife between the two strings, and the left half of the tumour dissected out rapidly and almost bloodlessly. At this stage of the operation, the breathing of the patient became very laboured and diaphragmatic. The left half having been removed, a similar step was taken with regard to the right. Considering the vascularity of the organ, comparatively little hæmorrhage occurred. Fourteen sutures were inserted, and a suitable dressing of boracic acid applied to the neck. The pulse of the patient, just previous to removal from the operating theatre, was almost imperceptible.

When the gland had been fairly removed, the trachea was found compressed, and presented a distinct crest in the median line, this being due to the pressure on its lateral walls. The bronchocele weighed 1 lb. 2 oz.

When placed in bed the breathing of the child was somewhat laboured; voice used only in a whisper; patient slept all the afternoon.—7 P.M.: Temperature 105°; pulse 120; slight vomiting; great thirst.—Midnight: Distinct râles in bronchial tubes of both lungs; is weaker than before.

The breathing gradually became more difficult from this time. Patient lingered till 6 30 A.M., when she died.

After death the walls of the trachea were found nearly touching one another laterally. No other part of the body was allowed to be examined.

Remarks by Professor SPENCE.—The mode of operating followed on this occasion was similar in principle to that first introduced by Dr. Heron Watson, and has for its object the restraint of that hæmorrhage which formerly made the removal of a goitre so formidable. By cutting off the main arterial supplies at the four corners of the gland, the bleeding that can occur is of a venous nature and not excessive in amount. Without some little care being taken, the trachea may be injured during the operation, especially if the isthmus of the gland is adherent to its walls, but as it is usually the lateral lobes that cause the pressure on the windpipe and other structures, the removal of the lateral parts, leaving some portions of the central piece, would afford relief to the dyspnœa. The size of the growth and the condition of the trachea, as revealed during the operation and after death, fully confirmed the opinion that operative treatment was the only chance of saving life; while the stenosed condition of the mitral valve, the length of time necessary for performing what was required, the patient being kept under chloroform for nearly an hour,

were serious obstacles to a successful issue. Shock after the operation in one so young was the principal cause for fear, and from death occurring as it did, to this cause alone must the result be attributed.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Multiple Sarcomata.—Multiple Cerebral Tumours.—Chyluria.—Softening Syphilomata of Liver.

The ordinary meeting of this Society was held on the 4th inst., the President, Dr. Murchison, in the chair. Again the subject which occupied most of the evening was that of chylous urine, Dr. Dickinson, in giving a full account of a case at present under his care, suggesting strongly that the admixture of the chyle with urine was due to mechanical obstruction in the thoracic duct. Dr. Ord dealt chiefly with the chemical analysis of chylous urine, and Dr. Morison described in full the case he referred to at the last meeting of the Society. Dr. Wilks, in bringing forward an example of softening hepatic gumma, dealt with a subject of which he is one of the pioneers, and it is to be regretted that time did not permit him to enter more fully into the question, or allow of any discussion upon his specimen.

Before the usual business commenced, the President announced that at the next meeting a communication would be made by Professor Lister upon "Lactic Fermentation and its bearings upon Pathology."

Mr. Butlin related particulars of a remarkable case of Multiple Sarcoma in a boy twelve years of age, the patient being exhibited. He had first come under Mr. Holden's care, at St. Bartholomew's Hospital, in June, 1875, with a tumour, the size of a walnut, in front of the left ear. It was removed, and proved on examination to be a round-celled sarcoma. The boy's general health was then, and has been since, in no way affected. Three or four months after the operation two more tumours of the same nature appeared beneath the skin in the left frontal region. These also were duly removed. In August, 1876, the lad re-appeared, with great enlargement and induration of both testes. On the supposition that possibly the nature of the disease was syphilitic, a course of iodide of potassium and mercury was prescribed, but without effect, the testicular tumours increasing in size. Then there appeared another tumour in the left scapular region, and one at the back of the left thigh. The latter growth sloughed, leaving a healthy granulating surface, which healed completely. Since that time other tumours have appeared—namely, on the back, over the trochanter, and, lastly, on the chest-wall, all gradually increasing in size and infiltrating the skin and surrounding tissues with the exception of the right testicle, which has certainly diminished during the last two or three months. Mr. Butlin remarked that there were several features of interest in the case—e. g., the nature of the growths, their relation to one another, the complete sloughing of one of them, the absence of visceral infection, &c. He believed the tumours to be round-celled sarcomata, and not of inflammatory nature, from the absence of any strumous or syphilitic dyscrasia, and the fact that they showed no inflammatory characters except in the one instance of the tumour in the thigh, which sloughed away, an event sometimes occurring to tumours. They all gradually increased in size with the exception of the right testis, a remarkable exception to the laws of tumour growth. In microscopical characters round-celled sarcomata approximate closely to simple granulation tumours; and, whilst holding them to be of the former class, it must be admitted that there was no evidence that the growths subsequent to the first had arisen secondarily by infection from it; for the lymphatic glands were nowhere infiltrated, and the absence of any evidence of pulmonary growths negatived the idea that the blood was the medium of the infection. He believed, then, that the multiplicity of the tumours represented outbreaks of the same disease, possibly evoked by irritation in a subject predisposed to their development. He could not predict what would be the end of the case nor explain why the internal viscera appeared to have hitherto escaped.—The President said there was at present in St. Thomas's Hospital under his care a lad who has all the signs of a mediastinal tumour pressing on both lungs, and who about fifteen months before the development of these signs had his thigh amputated for round-celled sarcoma. There had been no local recurrence of the growth.

Dr. Irvine exhibited a specimen of Multiple Tumours of the Brain, from a boy seven years of age, who died after about two months' illness. There was a marked history of phthisis in the family, and the boy himself had been delicate. At first his symptoms were chiefly vomiting after food, and severe left frontal headache; then failure of vision, right internal strabismus, and ptosis of the right upper eyelid. Five days after his admission into hospital (in August) he had an attack of vomiting, followed by convulsions, which began on the right side of the face and body, and then, becoming general, lasted for four or five hours. Right hemiplegia, with some anæsthesia, followed, but gradually passed away. Another convulsion in the next month was followed by headache, continued vomiting, and gradually increasing loss of vision, the discs being blurred, the retinal veins enlarged, and the arteries buried in exudation. After death there was found great enlargement of the bronchial glands, some simply swollen, others advanced in caseation, whilst one mass extending upwards in front of the trachea was softened into greenish-yellow fluid. Grey granulations, associated with pneumonic patches, abounded in the upper lobe of each lung, and more scantily in the lower lobe. Granulations also occurred in the kidneys. The brain was flattened on its upper surface, and anæmic; and one section was found to be the seat of numerous rounded tumours, most of which arose from the pia mater, and depended freely from it, so that many became detached. There was one the size of a walnut attached to the falx cerebri; others on the under surface of the cerebellum, and no fewer than five depended free into the lateral ventricles; one was attached to the velum interpositum, and three invaded the greater part of the right cerebellar lobe. The tumours were evidently of tubercular nature, but they could readily be enucleated, and did not infiltrate the surrounding tissue. Dr. Irvine pointed out that the bronchial glands were most advanced in degeneration; the tumours of the pia mater were next in development; the miliary tubercle in the lungs and kidneys being obviously late in appearance. He commented on the few symptoms to which the tumours gave rise; the third and sixth pair of the cranial nerves being alone affected, and that only partially. Towards the end of life deglutition became difficult, and this was possibly related to compression of the eighth pair of nerves by the cerebellar tumours. Dr. Irvine had seen two other cases in which symptoms attributed at the time to pressure on the eighth pair were found to be due to tumours in this region.

Dr. Dickinson exhibited a specimen of Chylous Urine obtained from a female patient, twenty-one years of age, sent to St. George's Hospital by Dr. March, of Wandsworth. She was a native of Dalston, and had only once in her life been away from London. Two years before her admission she began to pass chylous urine, and became emaciated, extremely distressed, and feeble. The urine, on admission, was extremely chylous; it resembled very rich milk, was perfectly white, and contained coagula. There was a considerable admixture of blood, but it contained no renal casts. The milkiness was less after fasting than after food, and there was always much albumen in the urine. On one occasion it coagulated into a solid mass. Generally the molecular base of chyle could be readily ascertained, but sometimes, although it might be milky to the eye, the highest microscopic powers failed to detect these molecules. The patient had lived well out of the hospital, and her treatment consisted of iron and cod-liver oil; and, looking upon the affection as probably due to regurgitation of chyle from the thoracic duct, Dr. Dickinson thought pressure might be applied with benefit. The same plan had been followed in one case by Dr. Bence Jones. In the present case Dr.

Dickinson caused the patient to wear an abdominal tourniquet, which was placed over the last lumbar vertebra. The immediate effect was striking, the urine passed after the first application of the pressure having a normal colour, and being scarcely chylous at all. The pressure, at first kept up every day, was afterwards employed only on alternate days, but the result has been very satisfactory, the amount of chyle being estimated to have fallen below one-eighth of its previous figure. The patient has also increased in weight from five to nine stone. Dr. Vandyke Carter's researches on chyluria in India were of the greatest value. He argues that chylous urine is not a secretion, but a mechanical admixture of chyle in the urine; for in it the fat and albumen have the same relations as in chyle itself; it contains the molecular basis of chyle, and the blood is not chylous when the urine is. Dr. Carter has also distinguished certain "chylous cells." Dr. Dickinson thought that much light was thrown on this view by the fact that in most cases in which there was a superficial chylous discharge, this took place from the pelvic region, or hypogastrium or thighs, parts to which conceivably the chyle would be regurgitated if the thoracic duct was obstructed. The mucous membrane of the urinary channels would lie in the same region of lymphatic supply, and might be similarly the seat of exudation of chyle. But few cases of post-mortem examinations are on record. In a case observed by Dr. Prout, the kidneys were healthy; and in one by Dr. Isaacs they were the seat of tubercle, which complicated the case; in Dr. Priestley's, they (in common with other organs) were fatty; and Dr. Lewis, in his valuable remarks on Filariæ, describes kidneys having certain fatty-looking channels running by the side of the urinary ducts, whilst the blood of the kidney, as of the other organs, swarmed with filariæ. Clearly the kidneys were not always diseased, and when to this is added the invariable absence of tube-casts (except in Dr. Ralfe's case, which was, however, apparently complicated with intermittent hæmaturia), although both blood and fibrin are passed in quantity, there is very strong ground indeed for the belief that the chyle is excreted by the kidneys. It may, however, reach the urine, in any part of the urinary channels, from the pelvis of the kidney to the bladder.

Dr. ALEX. MORISON also exhibited specimens of Chylous Urine, the one passed in the morning being much clearer than the other passed in the evening. The patient was an Algerine Jewess, fifty-six years of age, who had not been in Algeria for thirty-one years, the last thirteen of which had been passed in England. She came of healthy family, and had eight children. She had been stout, and had a great partiality for oily food. When first seen by Dr. Morison she was tall, gaunt, and emaciated, and complained of great weakness, lumbar pain, loss of appetite, thirst, constipation, and the passage of milky urine sometimes containing clots. The patient had been previously under the care of Dr. Leared. The urine varied in quantity, and in colour from a mere opalescence to dead-white opacity. During the Jewish fast held on Sept. 16th the urine became much clearer. The specific gravity varied from 1040 to 1017; and after separation of the clot, from 1013 to 1035. It was acid, or faintly so. It underwent spontaneous coagulation, the coagulum being extremely delicate, with granular material at its base. On twelve occasions sugar was found in the urine, both before and after filtration, and Dr. Morison showed a drawing of some sugar-crystals obtained from it. Microscopically, torulæ, leucocytes, small refractile bodies, but no casts or filariæ, were found. Ether caused a separation of the fatty acids, which crystallised out on the sides of the test-tube. Dr. Morison said that evidently this case could not be attributed to any endemic influence, so long was it since the patient had left Algeria. It was more probably related in some way to the menopause, and it was possible that the glycosuria might have preceded the chyluria, and even given rise to it.

Dr. ORD exhibited a specimen of Fat from Chylous Urine, which he had just learnt was from the same patient whose case had been described by Dr. Dickinson. The patient came under Dr. Ord's care a year ago, and he paid much attention to the chemical examination of the urine. The urine had then the appearance and odour of milk. Microscopically, the main element of the whiteness was found to be the molecular base of chyle, mixed with blood. There were but few leucocytes, which, with red corpuscles, were entangled in the delicate fibrinous clots that formed, and there were also entangled large masses of nucleated protoplasm. There were no filariæ, no casts nor crystals. Chemically, it contained albumen, both in the ordinary form and as alkali-albumen, and a pellicle formed on the surface on boiling, just as in the case of milk. It lost its pinkish colour on boiling, and nitric acid threw down a copious precipitate of albumen. There was no sugar. An etherial extract on evaporation yielded the fat, which occurred to the extent of 0·5 per cent. Chylous urine has been said to contain phosphorised fat, as lecithin, but Dr. Thudichum, who examined this specimen, could not find any such substance, and only a very small quantity of fatty acids. The specimen, indeed, was composed of neutral fats, olein, palmatin, stearine, and of alkaline albuminate, a very small quantity of fatty acid of a different melting point than either stearic or margaric. It resembles essentially chyle itself, and hence Dr. Ord could agree in the conclusion arrived at by Dr. Dickinson that in these cases the chyle itself was mixed with the urine. He had examined the blood on several occasions, and found it perfectly normal.

Dr. LEARED referred to the patient whose case had been detailed by Dr. Morison. When under his care there were marked constitutional symptoms. He was sure also that no evidence of sugar was obtained after filtration of the urine. He thought the disease was frequently hereditary, and its prevalence amongst the Jewish race (especially in Algiers and Morocco) might be attributed to the quantity of olive oil they consume. He referred to a case in which chyluria set in shortly after a severe railway accident. This was fifteen years ago, and the patient still has chylous urine.—The PRESIDENT inquired of Dr. Dickinson whether cases of chylous discharge from the surface of the body were always associated with chyluria?—Dr. DICKINSON said they were very often associated, and sometimes the two conditions alternate. He wished to add that in his case both the blood and urine had frequently been examined for filariæ, but unsuccessfully. He wished to be perfectly understood in this matter, for he thought very highly of Dr. Lewis's researches. He did not say at the last meeting, as he had been reported, that chyluria was not produced by filariæ, but that it was not invariably due to their presence. In reply to Dr. Leared, he added that we must wait for further evidence before stating at what part of the urinary channels the chylous exudation occurs.—Dr. PYE-SMITH thought that it was generally admitted, and always taught (even by Prout himself) that in these cases there was really an admixture of chyle in the urine. But did not observations tend to show that this admixture took place by the direct passage of the chyle into bloodvessels beyond the mesenteric glands, and would not this agree with Lewis's observations of the passage of parasites causing the formation of direct openings between the bloodvessels and chyle-vessels? Possibly adhesions between such vessels might lead to the passage of chyle into the blood, an explanation less difficult of conception than that of a regurgitation of chyle into the pelvic and inguinal lymphatics.—Dr. DICKINSON said that Prout believed that chyluria was closely related to albuminuria. He himself admitted that blood must mingle with chyle beyond the mesenteric glands. Further observations were required to test whether his hypothesis of the backward flow of the chyle, from obstruction in the thoracic duct or receptaculum chyli, were true or not.

Dr. WILKS showed a specimen of Softening Syphiloma of the Liver from a woman, thirty-five years of age, in whom there was no history pointing to syphilis. Two years ago her illness began with vomiting, jaundice, and emaciation, the abdomen becoming enlarged. Admitted into the hospital at that time, the presence of ascites was ascertained, and there was tenderness in the hepatic region. She then passed through an attack of acute peritonitis, after which the right lobe of the liver was found to be enlarged, and she died eventually of chronic peritonitis. In the right hepatic lobe there was found a large cavity filled with yellow bilious fluid, and surrounded by large hard masses of a syphilitic nature; other masses occurred elsewhere in the organ. Dr. Wilks remarked that usually the final process of syphilitic formations was a drying up, and cicatrisation, producing in the liver the familiar puckered capsular thickening. Indeed, one writer says that "gummatous masses never soften"; and Virchow laid great stress upon this, in describing what he called "dry caries"

of the skull. Formerly there was good reason for these dogmatic statements, for then there was so much scepticism prevalent that those who urged the specific nature of these growths exaggerated the characters in which they departed from ordinary inflammation. But this statement is not absolutely correct. Some years ago Dr. Moxon showed a syphilitic mass which softened into the hepatic duct, and thought that some cases of "scrofulous vomica" were softened gummata. Two years ago a patient came under the care of Dr. Wilks with an undoubted syphilitic liver, and a year later an "abscess" formed on the liver, which on being opened yielded a curdy fluid. He had seen also a softening cerebral syphiloma which yielded a cream-like fluid; and he recalled a case of mediastinal syphilitic growth which had softened. Then all had seen softening of nodes; quite lately he had in his wards one on the forehead which resembled a cyst; it was of the size of a walnut and fluctuated. To open it would have been bad pathology and bad treatment, for it would have caused it to suppurate, and would have led to caries. It was gradually resolved under iodide of potassium. He might suggest that a few cases of lung disease were of this nature; one such was shown him the other day by Dr. Goodhart. He had altered his opinion as to the stage and nature of the process of these gummata. Formerly he regarded them as due to the decay of old syphilitic materials, and therefore inactive, but he believed now that they are active, and that they continue to grow in every respect like other tumours.

The Society then adjourned.

MEDICAL SOCIETY OF LONDON.

The Connexion between Stomachic and Labyrinthine Vertigo.

AT the ordinary meeting of this Society, on the 3rd inst., Dr. George Buchanan, President, occupied the chair.

Dr. WOAKES read a paper "On the Connexion between Stomachic and Labyrinthine Vertigo," a continuation of the subject noticed by him at this Society last session, in his paper on Ear-cough. He commenced by drawing attention to a form of vertigo different somewhat from that known as Menière's disease, which has been so fully treated by Drs. Gowers, H. Jackson, and Ferrier. In this form the attack is sudden, without loss of consciousness, but also without any notable disturbance of the auditory organs. Dr. Woakes then referred to the vascular supply on the internal ear, this being from the vertebral artery, and the connexion of the cervical sympathetic with the ear was fully detailed, as showing how comparatively slight aural derangements might lead to profound symptoms. Similarly it was conceivable that irritation of the stomach might react through the vagus nerve and the sympathetic upon the labyrinth. He considers there to be a perfect analogy between the shock propagated from a contused brachial nerve with its concomitant vertigo and the lesser shock caused to the nerves of the stomach by unmasticated food, and propagated thence to the same vessel, and attended with the same symptom—viz., giddiness. Dr. Woakes referred to the connexion between the sympathetic and vagus nerves as explanatory of many of the symptoms of indigestion — e.g., shoulder-tip pain. This might be due to distension of the suprascapular nerve from the inhibitory dilatation of its minute vessels. His argument as to the *modus operandi* of "vertigo e leso stomacho" may be given in his own words:—"The ingestion of the irritant gives rise to an impression which is conveyed along the afferent channels forming a communication between the pneumogastric nerve and the inferior cervical ganglion, whence it is reflected to the vertebral artery in the shape of a wave of diminished inhibition. This is equivalent to an increased flow of blood to the labyrinth, with corresponding pressure on the endolymph." Thus is produced giddiness when the semicircular canals are alone involved; if the cochlea be also congested there is tinnitus. Deafness may be due to inflammatory effusion. It is impossible, however, to give more than the barest outline of Dr. Woakes' interesting paper. — Mr. DALBY observed that the subject of the relation existing between the auditory and pneumogastric nerves was full of interest, and cited numerous conditions in which this connexion was exemplified, especially cases of deafness occurring with derangements of the vagus nerve, the external and mid-ear being healthy. It was questionable whether the labyrinth was always the seat of change.—Dr. GOWERS made some remarks upon the relation between the stomach and the labyrinth by means of the vagus and cervical sympathetic, and considered the author's hypothesis a very ingenious one.—Dr. JAGIELSKI said that the following drugs produced vertigo—namely, salicylate of soda, belladonna, cocculus indicus, and nitrate of silver, some of them producing also peculiar movements, some falling to the left and others to the right side or in circles.—Mr. CUMBERBATCH remarked that the author of the paper had taken for granted that the centre of equilibrium was placed in the semicircular canals, although the fact is very uncertain. Section of the crura cerebri and pons is followed by many of the same symptoms, and if there were constant congestion of the semicircular canals, why was not hearing impaired? — Dr. BRANDON thought that many of the symptoms mentioned by the author might be due to spastic contraction of the tensor tympani.—Dr. WOAKES, in reply, did not wish to enter into a discussion on the physiology of equilibration. Spasm of the tensor tympani produced tinnitus, but was always associated with some local irritation. In reply to a question by Dr. Rogers, he said that sneezing, &c., produced vertigo, probably by air being forcibly driven into the tympanum.

Reviews and Notices of Books.

Notes on the Treatment of Skin Diseases. By ROBT. LIVEING, A.M. & M.D. Cantab., F.R.C.P., Physician in charge of the Skin Department, Middlesex Hospital. Fourth Edition, revised and enlarged. London: Longmans, Green, and Co. 1877.

THE rapidity with which this little book has reached a fourth edition is a proof of its value and utility. In one hundred and twenty-seven small pages the author discusses, in a concise but intelligible manner, the morbid anatomy of the skin; the etiology, diagnosis, treatment, and classification of diseases of the skin and its appendages, the hair and nails; and gives a glossary of terms and one hundred carefully compiled formulæ. The descriptions of the various diseases are short, but clear; while the indications for treatment can scarcely be mistaken. Dr. Liveing, like most other writers on dermatology, has at last yielded to the temptation to draw up a classification of diseases of the skin. The arrangement which he has adopted is based on Neumann's simplification of Hebra's system and on Mr. Erasmus Wilson's plan, and is evidently an attempt to combine the anatomical and the clinical methods of classification. But if this be so, we are at a loss to understand how diseases so dissimilar, anatomically and clinically, as eczema, psoriasis, and lichen ruber, have come to be placed in the same category. This kind of classification is somewhat reckless and calculated to mislead, inasmuch as these several diseases are essentially different, and cannot be said to bear any resemblance to each other, except at certain ill-defined stages or in anomalous or abortive forms. Dr. Liveing's classification, however, is not more confusing and conflicting than that of other authors. We can unreservedly recommend this little book as a safe clinical guide, containing all the information which a student or practitioner may require for the diagnosis and treatment of the more common forms of skin diseases.

An Atlas of Human Anatomy, accompanied by an Explanatory Text. By R. J. GODLEE, M.S., F.R.C.S., Assistant-Surgeon to University College Hospital, and Senior Demonstrator of Anatomy in University College. London: J. and A. Churchill. 1877.

THE object of this atlas is mainly to illustrate dissections not usually seen in the dissecting-room, and so to enable the

student to understand the mutual relations of parts which he is apt to regard as separate and independent. We cannot help thinking that such an object is best attained by following the directions in the manuals of dissections, such as those of Ellis and Cleland, and which are far better guides to a thorough knowledge of human anatomy than any series of plates and descriptive text can be. If plates must be used for relative anatomy, representations of plane sections, as in Braune's work, which in its English form is comparatively inexpensive, seem to us better fitted for this purpose than plates of ordinary every-day dissections, however well these may be executed.

The first part of Mr. Godlee's atlas, which will consist of twelve or thirteen numbers, contains four plates with two drawings in each, and is devoted to the anatomy of the neck. The drawings are very correct and well executed. We could, however, wish that they had been larger, for where so many objects have to be depicted, clearness is liable to be sacrificed unless the figures are drawn on a tolerably large scale, and this is very noticeable when some of these plates are compared with those of Ellis. The text is clearly written, and the surgical information is occasionally very valuable.

Purification of Water-carried Sewage. Data for the guidance of Corporations, Local Boards of Health, and Sanitary Authorities. By HENRY ROBINSON, Member of the Institution of Civil Engineers; and JOHN CHARLES MELLISS, Associate of the Institution of Civil Engineers. London: Smith, Elder, and Co. 1877.

THIS is a concise, lucid, and fairly impartial summary of our national experience in regard to the still unsolved problem of sewage-disposal. The various processes for precipitation, irrigation, and filtration which have been tried on the large scale are described in order, and estimates of the sanitary and financial results of each are given. We cannot say that the book is exhaustive, for very much of the scientific aspect of the subject is wanting; but what is given is good, and will save trouble to all who are interested in sanitary science.

That our knowledge of the subject remains still in such an unsatisfactory state is to a great extent due, we fear, to the timid and tentative character of all our sanitary legislation. As a rule, nuisances can easily be avoided or removed without serious loss to anyone, if only a sufficiently strong screw of compulsion be put on. Polluters will not cease to pollute until they are compelled. They resist as much as they can, and raise a terrible outcry about impossibility and ruin. But if the authorities are found to be in earnest, they soon give in, and find after a time that they have gained rather than lost by their enforced cleanliness. Unfortunately, however, sanitary authorities are not always in earnest, and Conservative sanitary legislation is nearly always "permissive" only.

OUR LIBRARY TABLE.

The Physician's and Surgeon's Visiting List for 1878.—Messrs. Smith and Co., medical stationers, Long-acre, are early in the field with their Visiting List for the coming new year. The list contains a good deal of information likely to be useful to medical practitioners, such as a vaccination notice; a table of fees claimable by medical men in police-courts, the coroner's-court, at assizes and criminal courts, and for services under the Factory Act, together with a pharmacopœial remembrancer, where will be found given the doses of different medicines, which are ranged according to their action. Messrs. Smith's Visiting List may be safely recommended.

A Model Diagram of the Organs in the Thorax and Upper Part of the Abdomen. By Dr. A. FERBER. London: H. K. Lewis. 1877.—This is a coloured lithographic representation in four leaves of the above organs as they would be met with in the successive stages of an autopsy, and would be of some service to anyone who was not acquainted with the position of the larger viscera and bloodvessels, if they were called upon to inspect and examine them at a post-mortem. We should be sorry to believe that there was such a member in the profession, but if there are any who have forgotten the position of these important structures, Dr. Ferber's model would undoubtedly be of use, and its portability and clearness are great merits.

L'Italia Agricola.—We have received several numbers of this journal for April, 1876, and for May, June, and July of the present year, which contain some interesting papers. The number for April, 1876, is accompanied by an excellent coloured map, showing the distribution of the various races of cattle in Italy, and contains also carefully worked-up statistics of their numbers in the different provinces. The July number has a good article on the Influence of Winds on Vegetation. The journal seems to be very well conducted by Dr. G. Chizzolini.

La Gazette Médicale de Strasbourg for May and June, 1877, contains a list of all the papers and cases that have been read or brought under the notice of the Société Médicale du Haut-Rhin from 1851-73. A report is given of a case of œsophagism, or of violent and painful contractions of the œsophagus, which was cured by the subcutaneous injection of hydrochlorate of morphia. The number for June gives an account and a plate of a new apparatus for supplying a constant current of electricity, in which both the quantity and the tension can be varied at will.

"Them Books." By WILLIAM GILBERT. London: Dalby, Isbister, and Co. 1877.—This little book, which does not at all treat of matters medical, is worthy of notice at our hands because it is an earnest and in many respects a clever attempt to show how deeply imbued the lower classes of the metropolis are with drink and the love of drink. Mr. Gilbert takes as his chief anchorage an institution that, as he tells us, exists somewhere on the Surrey side of the river "for the reception, comfort, and reformation of the female ticket-of-leave convict." The habits of the unfortunate race are in this story but too accurately sketched; yet a vigorous, and, as we think, a successful, effort is made to show that even this gloomy variety of human nature has its bright side. The receiver of stolen goods and his habitat, manners, and customs are well depicted. It is hardly in our province to describe the plot of the story, which, by the way, is of the simplest possible kind.

Analytical Records.

HYPNOPOIETIC.

(JOHN RICHARDSON AND CO., LEICESTER.)

This high-sounding title is applied to a well-prepared and purified solution of opium, equal in strength to that of the Pharmacopœia. A good many such solutions have appeared from time to time, some of them of excellent quality, and we do not perceive that this is recommended by any particular novelty.

LIQ. SANTAL FLAVA CUM BUCCO ET CUBEBÆ.

(C. J. HEWLETT & SON, CRECHURCH-LANE, LEADENHALL ST.)

A safe and valuable remedy for gleet &c. It mixes perfectly with water, and, as it can be taken with ease, it is sure, we think, to come into common use.

COOPER'S COMPOUND MUSTARD CLOTH.

Messrs. Cooper, pharmaceutical chemists, of Gloucester-road, South Kensington, have submitted to us specimens of

their mustard-cloth. It possesses the advantages of being at once a rubefacient and an emollient, or a combined mustard and linseed-meal poultice. It can be immediately applied, requiring only to be passed through water, either warm or cold. The compound mustard-cloth is, we imagine, destined to become a popular household remedy. We should not omit to state that it is elegantly got up.

New Inventions.

DR. BATTEN'S URINARY TEST CASE.

We have no hesitation in bringing Dr. Batten's very ingenious invention to the notice of our readers. It seems to fulfil a real want; and an actual inspection of the apparatus has shown us how large an amount of care and thought has been bestowed both by the inventor and the manufacturers on the perfection of this addition to the armamentarium which the busy practitioner finds it convenient to stow in his pockets or his carriage. The following is Dr. Batten's own description of his instrument:—

FULL SIZE

Every medical man must at times have felt the inconvenience arising from not having the means with which to examine the urine of a patient whilst still at the bedside. The ordinary urine cases are too large to be always carried about, whilst there is with them generally also the risk that their contents will be spilled.

I have been asked to bring under the notice of the profession a small case which can easily and safely be carried in the waistcoat pocket, and which for the last two years I have found to answer the purpose extremely well. It consists of an aluminium case about four inches long and half an inch in diameter, resembling in appearance the ordinary pocket caustic-holder, and similarly divided into two compartments. The smaller compartment (A) has within it three vulcanite specific gravity beads, marking the extreme and mean specific gravity of ordinary urine. The larger compartment (C) contains a test-tube, within which are three or four capillary tubes (hermetically sealed) charged with nitric acid, and a bottle for Fehling's test solution; this bottle is closed with an india-rubber stopper, upon which the alkali has no action, and hence the copper solution will keep good and clear in it as long as may be required. The screw junction (B) uniting the two parts of the case is itself hollow, and holds, excluded from the air, the red and blue litmus-paper. A wineglass and a candle or lamp, which can always be obtained, are all that can be further required. It is perhaps scarcely necessary to add that by holding the test-tube in the blue portion of a flame all smoking of the glass is prevented.

The specific gravity beads will be found to tell the specific gravity of the urine very accurately, whilst they have the advantage—a most important one at times—over the ordinary urinometer, that a very small quantity of urine, two or three teaspoonfuls even, will be sufficient for the purpose.

To those who are unaccustomed to the use of the nitric acid tubes I may say that the best mode of using them is, first, to shake the acid down to one end of the tube, and then to break off the other end with a sharp rap of a knife or other hard body. On inserting the open end of the capillary tube just within the mouth of the test-tube, and heating the other end of the capillary tube in the flame of the lamp, the whole of the nitric acid will be driven into the test-tube.

This pocket urine case has been recently very neatly and admirably made for me, after a considerable amount of trouble on their part, by Messrs. Salt and Son, the surgical instrument makers of Bull-street, Birmingham. All the parts are made to measure, so that at any time the bottle, the test-tube, and the charged capillary tubes, of the proper size and length, can be obtained from the makers by return of post.

SCOTT'S CHEST-MEASURE AND CYRTOMETER.

Since the introduction of cyrtometry as an aid to diagnosis, several modifications upon the simple instrument originally devised have been made. One of these, the latest—and, perhaps, the best—is that invented by Dr. George Scott, of Southampton. It consists of two bands of electro-plated Britannia metal, graduated in inches and arranged so that, when adjusted, each half is united to its fellow by a hinge-joint. The material of which it is composed gives it a high degree of flexibility, whilst, at the same time, it is sufficiently firm to retain the shape impressed upon it. The movable hinge-joint by which each of the metal tapes is united to its fellow is placed over a disc of metal, which is applied over the spine when the instrument is being used. A clamp is also supplied, serving to fix the two halves of the cyrtometer together when it is applied to the chest. The merit of the instrument lies in its capability of ready adjustment and removal, whilst perfectly retaining its shape, and thus allowing of a tracing being made from it. It may be procured at Messrs. Maw, Son, and Thompson's, of Aldersgate-street.

THE FOOD INSPECTORS' CABINET.

Dr. Sedgwick Saunders, the able medical officer of health for the City of London, has devised an ingenious cabinet for the use of his inspectors of food and drugs, particulars of which cannot fail to interest provincial medical officers of health, and will, we imagine, lead to its general adoption throughout the country. The cabinet, 11 + 6 + 10 inches in size, contains—1. Six wide-mouthed bottles, which suffice for two seizures (it is scarcely necessary to observe that each sample must be divided into three portions, one of which is left with the vendor, one retained by the inspector, and one given to the public analyst). Each bottle is perforated through the neck, the perforations corresponding to a hole in the cork, through which a string of special make and colour is drawn and tied in a groove on the top of the cork, and then sealed with official seal. 2. A book in which is recorded the particulars of the article seized. 3. An official seal. 4. A tray holding wax taper, matches, scissors, labels, inkstand, penknife, pen and pencil, cork-screw, paper-knife, sealing-wax and string, and a stiletto for piercing the corks. The cabinet is made by Messrs. Maw and Son.

AN IMPROVED STOVE.

Messrs. Barnard and Co., of Norwich, have recently introduced to our notice a grate which appears to possess some special advantages over those in ordinary use, especially in buildings, such as hospitals, in which it is desirable to economise fuel and avoid dirt. The chief difference of construction is that the bottom, back, and sides of the stove consist of a solid lump of fire-brick. The fact of the bottom of the grate being solid necessarily lessens the amount of draught, and also the consumption of coal, while the large surface of fire-brick, when thoroughly heated, sends forth a ruddy glow, and adds much to the economy of the arrangement. The fronts of these grates are of a variety of patterns, both in iron and brass, some of them being very elegant, and the prices are not too expensive. The London warehouse is in Queen Victoria-street, and is quite worth a visit.

THE LANCET.

LONDON: SATURDAY, DECEMBER 8, 1877.

THERE was more force than fairness, or even discretion, in the strictures offered by the chairman of the Middlesex magistrates on an alleged unnecessary and "illegal" post-mortem examination, for which the Board, in the plenitude of its power, refused payment of one guinea at the session of Nov. 29th. If the *facts* before the meeting had been more explicit than they manifestly were,—had both sides of the case been represented instead of only one, a magistrate less profoundly assured of his own supreme sagacity, and not so apt to be swayed by impulse rather than judgment, than is the Marquis of SALISBURY, would have hesitated to express a hope that, in cases where medical men attempted to act in the manner described—that is, to make a post-mortem examination against the wish of the friends and without a written order from the coroner—"the relatives would not scruple to turn them out of doors with the least ceremony possible."

Within well-defined limits Lord SALISBURY is right: medical men are not justified in playing the part of officers charged with the execution of "orders,"—written or verbal, expressed or understood—which may issue from the coroner. We cannot too strongly insist that, whether in the service of a court of justice, a board of guardians, or any local authority, it is not only unprofessional but unsafe to act in the absence of explicit and formal instructions. The practice of meeting public officials half-way and eking out their neglect of duty is neither dignified nor expedient. The too-confiding medical officer places himself in a false position, and is likely to experience the disagreeable consequences accruing to that predicament. It may be mutually convenient, as between coroners and skilled witnesses, boards of guardians and their officials, sanitary authorities and their agents, to take action in advance of an order, and so prevent adjournments, deaths by neglect, and the spread of epidemics; but looking to the manner in which these extra-formal services are apt to be acknowledged, we cannot but trust they will be refused "with the least ceremony possible." Medical men owe it to themselves and their profession to decline the responsibility of pursuing a course of conduct which may be mercilessly reviewed.

In the particular case upon which Lord SALISBURY founded his remarks there would seem to have been less than common ground for complaint. Mr. E. L. T. SMITH, of Hounslow, the surgeon censured for making an examination which had not been "ordered," and the relatives refused to sanction, writes to point out a few not unimportant inaccuracies in the story of "facts" assumed. 1. The deceased did not die in the presence of his wife and a neighbour, or either of them. He had retired after dinner with a newspaper to an adjoining room, and was found dead. 2. The medical witness heard nothing whatever of the objection of the son of the deceased, nor did he see him, although making every effort to do so, and sending his carriage a considerable distance to find him. 3. The wife of the deceased not only offered no opposition to the examination, but "gave her consent," in the hearing of two credible witnesses; and so far from any protest having been made by a neighbour, as alleged, the person referred to provided necessaries for the examination, and gave the surgeon refreshment afterwards. 4. The usual practice—we have said what we think of that practice—was pursued in this instance. It is not usual to wait for an order from the coroner. Discretion as to an examination is left by the coroner, and the instruction was in the present case received from the coroner's officer. There can be no question as to the prevalence of this method. In nine out of ten instances medical witnesses are empowered by a verbal in place of a written order, and in cases of doubt the coroner, willing to economise, leaves it to the surgeon to say whether the cause of death can be made out from general appearances without an autopsy. It would be superfluous to insist that the whole fabric upon which the chairman of the Board of Magistrates based his injudicious remarks falls to pieces in the face of Mr. SMITH'S explanation. Would it not have been as well to ask the person whose conduct was impugned whether he could throw any new light on the subject before condemning him "with the least ceremony possible"?

The whole question of post-mortem examinations needs to be revised, and the practice in regard to these inquiries readjusted. A more competent authority than a lay Board of Magistrates should be entrusted with the control of a matter so purely scientific. Whether an examination is, or is not, necessary in any particular case, must depend on facts and conditions of which the non-professional person, however sagacious, can have no cognisance. It is, in truth, a question of processes, whereas the interest of a tribunal of justice is limited to results. The purpose of the inquiry is to ascertain "the cause"—and, by implication, the manner—of death. The subsidiary question, How is this to be learned? must be one for the expert. To come at once to the root of the matter, it ought *always* to be left to the medical witness to determine whether an examination is necessary. If a non-medical coroner is not guided by the counsel he receives from an expert, he is almost sure to err. How often have the ends of justice been defeated by the refusal or neglect of coroners to "order a post-mortem examination in cases which have proved to be inscrutable without an autopsy; and how frequently have such inquiries been rendered useless by delay? It is a gratuitous aspersion on the honour and intelligence of the great body of general practitioners to imply that they are greedy of the fees payable for this extra service. We venture to assume that the paltry sum doled out in requital for the toil and risk incurred in a post-mortem examination for legal purposes seldom repays the practitioner, and we believe few busy men who have the misfortune to be summoned before the coroner's court would not prefer to pay a larger fee to a substitute. Seeing that this is the fact, it is at once provoking and inexplicable to find men of presumed acumen and undeniable position giving utterance to remarks so graceless and groundless as those which dropped from the lips of the Marquis of SALIS-

BURY in connexion with a case which was not fully before him, and into the real merits of which he did not care to inquire.

THE remarkable effect of salicylic acid and its salts in acute rheumatism has led to its employment in many other diseases, and the results obtained in some of these were described at the discussions which have taken place before the French societies, and to which we lately directed attention. That a drug possessing such a remarkable power over the pyrexia and articular pain of one disease should exert an influence in other diseases, presenting one or both of these characteristics, is a natural expectation. It has not been wholly unrealised, although the extent to which it is useful in other diseases than acute rheumatism seems to have limits which are soon reached, and to be the subject of some discrepancy of opinion.

We remarked that M. SÉE has found the salicylate treatment much more effective in subacute rheumatism than many other observers have asserted. He has also used it in chronic rheumatoid arthritis, and has found that it is very useful in the acute exacerbations of the disease. The pain is quickly removed, the swelling is soon lessened, and the muscular rigidity is diminished in a remarkable manner. To effect this, however, large doses are necessary. GUENEAU DE MUSSY found it useful in one case of this affection, but of no service in another. The same physician had found it entirely useless in sciatica, but in acute muscular rheumatism, lumbago, &c., M. SÉE had obtained very good results, all pain and stiffness being removed in two days.

Gout is another disease in which salicylate of soda has been largely used. M. SÉE found that the effect is speedy diminution in the pain of acute gout, and that even in chronic gout it is useful, and produces a gradual diminution in the swellings and nodosities. This opinion was corroborated by GUENEAU DE MUSSY and LÉPINE. The latter had seen remarkable effects produced in a case of saturnine gout. In gonorrhœal rheumatism and in chorea it has been found useless. Given in full doses, it has considerable power of reducing the temperature in phthisis, but, as might be expected, without any corresponding amelioration in the symptoms. Indeed, its use is not wholly without danger, for it has appeared to induce serious gastro-intestinal troubles and cerebral symptoms.

Perhaps the most important practical question connected with the employment of salicylic acid, next to its use in acute rheumatism, is its effect in typhoid fever. There is much discrepancy in the results hitherto recorded. A favourable report was given by Dr. GUENEAU DE MUSSY, who had used it in twenty-seven cases in small doses without having a single death. He only concluded from this that in small doses the drug does no harm in the disease. M. SÉE believed, however, that it was of little service, and that doses which would have an antiseptic influence on the intestine would produce irritation, but he seems to have concluded this rather from theoretical considerations than practical experience. M. LÉPINE concurred in its inutility. M. OULMONT had found that of ten cases in which it was employed, marked defervescence was produced in eight, but the effect was not durable. This corroborates the conclusion of GOLTDAMMER, who found that the duration of the disease was not diminished in any of the fifty-six cases he observed. An important series of facts have been published on this point by SCHRÖDER, of St. Petersburg. In a military hospital, 160 cases of typhoid were treated with salicylates, chiefly with the soda salt. Of these thirty-one were fatal, the mortality being thus 19·4 per cent., the mortality of the preceding 211 cases treated by other methods having been 14·7 per cent. The causes of death in the salicylate cases were—in four, perforation; in five, pneumonia; and in the others, parotitis, parotitis with œdema of the glottis, pleuro-pneumonia, and meningitis. The antifebrile action was unquestionable, but no favourable influence on the course of the disease could be observed. By small doses the pulse was rendered less frequent, but by large doses it was accelerated, and the continued use of large doses (three drachms a day) induced symptoms of collapse. SCHRÖDER concludes that the treatment is far inferior to that by cold baths. This is not, however, the opinion of JAHN, who has published a series of statistics of three years' treatment of typhoid on three different systems. In the first, thirty-nine cases were treated with large doses of quinine, the application of bladders of ice, and mild "water treatment." Nine patients died, six of them from the intensity of the disease. The average duration of treatment in the hospital was sixty-six days; complications were observed seven times, severe cerebral symptoms were present twenty-five times, and severe intestinal symptoms twenty-nine times, while bedsores were observed in nineteen cases. In the following year sixty-three cases were treated with quinine and an energetic "cold-bath treatment." The deaths were six, of which five were from the intensity of the disease. The average duration of treatment was fifty-three days, complications were observed in seven, severe cerebral symptoms in seven, severe intestinal symptoms in twenty-one, bedsores in seven. In the next year thirty-five cases were treated by salicylates: five grammes (about a drachm and a half) of salicylic acid were dissolved in water with an equal quantity of bicarbonate of soda, and taken as a beverage. The deaths were three only; the average duration of treatment was thirty-seven days. Complications were observed twenty-four times, severe cerebral symptoms were present in no case, severe intestinal symptoms in one only, bedsores were observed in no case; the three deaths were all from double pneumonia. The contrast between the observations of JAHN and SCHRÖDER is so great as to make it probable that the epidemics differed very much in severity and character. It would seem, from the statistics, that in the last year of the epidemic observed by JAHN, the cases were of an exceptionally mild character, and his conclusions are therefore to be received with some reserve. He believes, however, that in large doses the drug acts not only as an antipyretic, but has a "healing" effect on the typhoid process; that the antipyretic effect is shown in the remission of the cerebral symptoms; that a direct effect is produced on the digestive organs—the gastric symptoms diminish, the appetite returns, the diarrhœa is moderated or arrested; that, as a result, the prostration is diminished, and the convalescence is abbreviated; that the soda salt is preferable to the acid, because it has the same curative influence, and possibly a

more rapid effect, while it produces no irritation of the respiratory tract; that no concurrent effect of the salicylate was observed, except that the tendency to epistaxis appeared to be increased by its use; that relapses were not avoided by the use of the salicylate, and it is therefore well to continue to give it in smaller doses during convalescence. A case which was brought last session before the Clinical Society by Dr. MURCHISON is in such striking contrast to the second of JAHN'S conclusions that it ought not to be overlooked. The case appeared to be one favourable for testing the effect of salicylate, for the pyrexia was considerable, but was unattended by diarrhœa or delirium. The effect of the drug was to reduce the temperature as rapidly as in rheumatic fever, but when the drug was discontinued the pyrexia returned. While under the influence of the salicylate the patient had violent delirium, ceasing when the drug was omitted; there was also albuminuria, and almost total suppression of urine, both passing off as the effect of the drug ceased. It is clear, however, from the result of continental experience, that the dose of the salicylate was too large. Six drachms daily were given, three times the quantity employed by JAHN. Evidently, in typhoid the doses cannot be borne which do good in acute rheumatism, and hence a single case of poisoning by the drug, such as this, has no significance with respect to the possible beneficial effect of its employment in smaller doses.

In intermittent fever the action of the salicylate is marked, but is less than that of quinine. It has been carefully tried by ROSENSTEIN in thirteen cases. In three cases only was there a complete cure; in six cases no effect could be observed; in four cases the influence of the drug was transient, so that the administration of quinine was necessary. The dose of salicylate employed varied from a minimum of one drachm to a maximum of four drachms daily.

THE time has come when, we think, it may be stated with some certainty that the principles of house-drainage are pretty definitely determined. Few questions in sanitary science and practice would furnish perhaps, if examined in detail, a more instructive lesson to the sanitary student than this one. Going back to the days of the General Board of Health, and the admirable reports of the engineers of that body on the subject, one is astonished to see how slow has been the development, how difficult the solution, of a question which was fairly grappled by the Board referred to, and which was at the time hopefully believed to have been settled by it. But presently it began to be observed that the system of house-drainage approved by the Board, while it was effective for the removal of the obvious evils for which it was designed, gave rise to evils peculiar to itself—evils which, if less generally diffused than those which had been observed, were not the less serious to the extent that they existed. The fundamental principles of house-drainage had been determined, but the detailed application of those principles to the structural arrangements of drains, and the varied requirements of dwellings, could only be learned from experience; and, as it has happened, a quarter of a century has barely sufficed to exhaust virtually, as we hope, its teachings. Bit by bit we have got to know the behaviour under varying circumstances of the different materials of which our drains are constructed, and which, unknown, was apt to be productive of unsuspected mischiefs. We have also slowly unlearned our former too great and, as it has proved, misplaced confidence in "traps," as protectors against certain evils connected with drains, and ascertained in what manner those evils may be obviated. There still remained the question of the ventilation of house-drains, the importance of which has long been recognised, but which has presented difficulties of solution which have only recently been fully overcome. The public is indebted to Mr. ROGERS FIELD, C.E., for giving the finishing stroke to our knowledge of this subject, and for putting it within the power of everyone who builds a house, and of most people who occupy houses already built, if they so will it, of placing the house-drainage in such a state that it shall work effectually without producing any of the dangers which have hitherto been too commonly incidental to it; or a modification of existing drains, not a new construction being in question, shall diminish to the least point, if not altogether extinguish, these dangers.

It is many years ago since Mr. ROBERT RAWLINSON, C.B., C.E., showed that an essential question to be considered as precedent to the proper ventilation of house-drains was the cutting off of any connexion between the air in the common sewer and that in the house-drains. He effected this purpose by what has been termed an "air-break"—that is to say, by opening a communication between the interior of the main house-drain and the outer air at some point between the house and the common sewer. He put also a "water-trap" on the main drain between the opening and the common sewer. By this arrangement continuous connexion between the sewer-air and the drain-air was broken, and any sewer-air which might chance to regurgitate, or be diffused through the trap, passed not into the house-drain, but through the opening described to the outer air. Nothing is, perhaps, more remarkable in the history of sanitary science than the slowness with which the important principle underlying Mr. RAWLINSON'S practice in this respect has been rightly apprehended and acted upon. It is true that not a few ingenious inventors have had the wit to seize upon it and apply it, but under circumstances which, as a rule, would make its application a luxury for the few, and not the common property of the many. It was not, indeed, until Mr. FIELD recently took up the question that the full bearing of Mr. RAWLINSON'S practice upon the ventilation of house-drains became fully understood, and the practicability of its application to houses under all circumstances was made generally known. The public aspect of the question was first worked out by Mr. FIELD at Uppingham, in relation to the late outbreak of typhoid fever there; and it may be most readily studied in the bye-laws and regulations as to house drainage of the Sanitary Authority of that town, with Mr. FIELD'S observations thereon, published by SPON. Mr. FIELD, besides simplifying generally the construction and arrangements of house-drainage, shows how in *all* cases of new buildings, at least, the house-drains may be effectually cut off from communication with the air of the common sewer, and the outer air admitted to them in such fashion that (unless under states of drain-deterioration not necessary to mention here) there shall

scarcely be an appreciable difference, if any, between the outer air and the drain air. In fact, he reduces the house-drains to the position of simple conduits to carry easily away and conceal from the eye and nose matters offensive for the moment to the senses of sight and smell, but otherwise practically open-air passages. This is the culmination of science and practice in this important matter, and the highest testimony to its value is afforded by the fact that Mr. FIELD's method of procedure is substantially adopted in the Model Bye-laws as to house-drainage for the use of Sanitary Authorities lately issued by the Local Government Board, and will thus, it is to be presumed, become the common practice of the kingdom.

Annotations.

"Ne quid nimis."

"HYDROPHOBIA AND RABIES."

SIR THOMAS WATSON has opportunely contributed a useful chapter to the literature of hydrophobia by his paper in the current number of *The Nineteenth Century*. The views propounded are not new, although they are set forth with the freshness and grace of this classic medical writer's vivid and elegant diction. What remained to be said, for the public, has now been said, and so well that nothing need be added. Upon the lines of this article, with the able expository statements placed before the community by Sir William Gull, Sir Joseph Fayrer, Inspector-General Balfour, and other authorities in the columns of THE LANCET, the student—professional or lay—may pursue this grimly popular subject to the limits of actual knowledge, and other contributions which have appeared in our own columns will carry him as far as it is safe to go into the region of speculation and conjecture. In respect to one matter, upon which we ventured to offer a suggestion in a leading article last week, by way of explanation of the supposed long periods of incubation or latency, Sir Thomas Watson propounds the same theory, remarking that he first broached the view forty years ago, "but I do not know that it has been (to use a barbarous modern term) endorsed by any of my professional brethren." In a foot-note he adds, "I find that Dr. Anthony Todd Thompson, in the thirteenth volume of the 'Medico-Chirurgical Transactions,' 1826, has been tiresome enough to forestall me in this suggestion." May we be permitted to follow suit, although it involves a confession of ignorance or forgetfulness, and protest that we had no notion the hypothesis had been submitted before it appeared in the leader pages of THE LANCET. The circumstance is of no moment beyond the curious illustration afforded of the difficulty which exists of making a novel reflection on this worn subject. It is, therefore, no disparagement of the service rendered by the paper in *The Nineteenth Century* to say that its story and teaching will not strike the medical reader as new. The principal recommendations are two, one for general, the other personal action. Sir Thomas Watson gives the sanction of his authority to a proposal which originated with Mr. Youatt, and has been supported by Sir James Bardsley—viz., to place all dogs in this country in quarantine for a period of seven months with a view to extirpate the disease rabies, of which hydrophobia is the counterpart in the human subject. We fear the proposal is scarcely practical, but, if possible, it might be tried. In any case much good would, doubtless, be accomplished by the owners of domestic animals being made legally responsible for their care, and bestowing closer attention on their wants and maladies. The other suggestion to which it is desirable to allude is the recommendation that when a person is bitten he should *instantly* apply a ligature firmly above the wound, and strive to work the poison out by pouring water upon the bite from a height. This is not suggested instead of more effective measures, but as a precautionary proceeding which may be useful when the circumstances admit of its adoption. Regarded in *that* light it is worthy of consideration. We do not share the fear expressed by Sir Thomas Watson that grave danger would attend the expedient of sucking the wound, except in cases where there may be an abrasion of the lips or mouth. This point, however—the possibility of absorption "through" the mucous membrane when intact—needs to be further investigated. We would only urge that disastrous results, rarely ever, if indeed they have been *known* to, follow the familiar use of suction by the mouth in the case of wounds poisoned by snakes, arrows, or decaying animal matter in the dissection room. The contents of the mouth are instantly discharged, and bad effects have not, so far as we are aware, been known to discredit the practice. We commend Sir Thomas Watson's paper to the perusal of our readers.

"TRUTH" ON "THE 'UNSPEAKABLE' STAG."

A CONTEMPORARY which claims to hold the mirror up to nature, law, and fact—social and political—has stigmatised in no measured terms some remarks we recently offered on the subject of "Tame Stag Hunting." The rejoinder is made in an article of considerable prolixity, one-half of which is devoted to the defence of fox-hunting—a sport we have not impugned. Phrases so familiar as "Is Saul also among the prophets?" "Will wonders never cease?" "This is an age of heterodoxy," "Sir Oracle speaks," "Let the cobbler stick to his last," do duty for pleasantries. What may be lacking in argument is substituted by abuse, a little coarse, and somewhat undiscriminating. Regarded from an artistic point of view, the effort is not a success. We regret this circumstance, because, when attacked, it is pleasant to feel the onslaught has been undertaken with weapons and an address worthy of the occasion. Here and there our assailant makes a point—as, for example, in the witticism about "men whose vocation and pleasure it is to live with '*Lancets*' in their pockets;" albeit we seem to have heard something of the kind before, and there is an aphorism credited to Johnson concerning the class of cleverness for which credit may be claimed. Meanwhile there is absolutely no trace of reasoning, no new ground advanced, or old argument refurbished, in apology for the practice we denounced. If there had been anything to urge on behalf of tame stag tormenting, so diligent and expert an advocate as the champion who has now entered the lists would surely discover and expound it. The only consideration which throws doubt on this presumption is the circumstance that our censor does not perceive the difference between a genuine *tu quoque* and the broadcasting of an imputation which has nothing in common with the charges to be repelled. We are counselled to "write no more about hunting;" "Let those who live in glass houses beware how they throw stones." Tame stag hunting must not be denounced because "these self-sufficient gentlemen who again call attention to the perilous character of the 'amusement which involves needless brutality,' are, forsooth, the doctors, who, at this moment, are on their trial before the public, charged with the crime of vivisection"! An authority so independent as *Truth* should not fail to recognise the wide distinction which exists

between the crazy allegations of a few fanatics and public opinion. There can be no hesitation in affirming that the judgment of intelligent common-sense has not been against "the doctors" in the matter of vivisection; but if it had been otherwise this would be no reason why we should refrain from speaking the truth about the wanton cruelty of chasing tame deer for the sole sake of a pastime miscalled sport! The investigations pursued in the name of science have always had a scientific, and, in a restricted sense perhaps, a humane object. We have never disguised our opinion that experiments on the living animal ought to be limited to cases in which there is likely to be an immediate gain, and that in every instance where the circumstances admit of its use, a full anæsthetic should be employed. Possibly, the new method of "mixed narcosis" may enable the exceptions to be reduced to a minimum; but we only allude to this question of "vivisection" incidentally to clear away an irrelevant matter which has been imported into the present controversy with the obvious purpose of creating a diversion from a known weak point. Again we say our appeal is to real sportsmen, not to the pretentious and self-appointed champions of a practice they do not apparently understand. We have no fear of being mistaken by those to whom we speak.

PERSISTENCE OF BRANCHIAL FISSURES.

THE gains to be derived from the study of morphology received an apt illustration in the paper communicated to the Royal Medical and Chirurgical Society by Sir James Paget, and in the discussion that ensued upon the reading of the paper. Not only does the knowledge of developmental processes throw light on many hitherto unexplained defects and seeming aberrations of structure, but, as pointed out by Sir James, the very defect itself may indicate an inherent weakness in a region, rendering it more prone subsequently to become the seat of actual morbid changes; and the field thus opened is practically boundless. There is also a peculiar fascination about the subject, due to the discovery of vestigial relics of what, in the normal course of development, are transitory and fleeting structures, that adds greatly to the interest with which it is pursued. The paper in question was not limited simply to the subject of the occurrence of defects in the external ear ascribed to the retention of parts of the first post-oral branchial fissure, but opened up the whole question of the occurrence of branchial fistulæ in man. At the risk of wearisome repetition, we may glance again at the ground covered by this paper. In the mammalian embryo, at the fourth week, there are, on each side of the head behind the oral cavity, four clefts, or fissures, communicating with the anterior extremity of the alimentary canal, having been formed from within outwards by a process of absorption. They are homologous with the more numerous clefts in the branchiate vertebrata. By the sixth week the third and fourth of these fissures have disappeared, and by the ninth week the first alone remains, and this persists throughout the whole of life, being converted into the external auditory meatus, tympanic cavity, and Eustachian tube. Important structures are, however, developed in the folds between the clefts—the branchial arches; so that, in spite of the change in form produced by the development of the neck, the original situation of the clefts may, by reference to these structures, be always indicated. The first arch is that in which Meckel's cartilage is formed, and around which the mandible is subsequently developed, whilst nearer the base of the skull the malleus completes this mandibular arch. Between this and the second or hyoid arch comes the first post-oral cleft, which alone persists throughout the whole of life. In the hyoid arch are developed the styloid process, the stylo-hyoid ligament, the lesser cornu of the hyoid bone, and the incus of the ear, the stapes and the stapedius muscle being connected with it. The third arch is represented by the great cornu and the body of the hyoid bone, whilst the fourth leaves no permanent structure to mark its early site. Occasionally the clefts between these arches remain more or less patent, and the recognition of this fact not only explains the occurrence of congenital fistulæ in the neck, but also of cysts in the same regions, and of diverticula from the pharynx or œsophagus. The formation of the external ear is subservient to that of the first post-oral cleft; it is an integumental operculum or fold, and Sir James Paget suggested that the curious instances of "supernumerary auricles" were doubtless similar formations in strict serial homology with the auricle of the ear, and that therefore they are probably folds connected with branchial fissures beyond the first. Now that attention has been so prominently drawn to the subject, we may hope for further investigations, and especially in the direction of the development of these opercular folds and their relation to the branchial fissures. Until we have this additional knowledge, it must be confessed that it is not quite easy to see how the first post-oral fissure, persisting normally as the auditory passages in the cases related, should be prolonged upon the integumentary fold, which is formed subsequently to the formation of the cleft. Upon the solution of this depends the question as to whether the congenital fistulous tracks on the pinna, undoubted arrests of development as they are, can in due strictness be styled vestiges of the branchial fissure itself.

THE LONDON SMALL-POX EPIDEMIC.

RECENT weekly returns of the Registrar-General afford undoubted evidence of a recurring wave of the small-pox epidemic in London, especially in the east group of districts. The fatal cases of small-pox registered in the metropolis, which had been 9, 25, 14, and 27 in the four preceding weeks, further rose to 31 in the week ending the 1st instant. Of these 12 occurred in the Metropolitan Asylum Hospitals, 4 in the Highgate Small-pox Hospital, and no less than 15 in private dwellings, almost invariably under circumstances rendering home isolation a manifest impossibility. Fourteen of the deceased small-pox patients (including those who died in hospital) had resided in East London, of whom 7 belonged to Stepney, 5 to Mile-end Old Town, 1 to Poplar, and 1 to Shoreditch. The 7 fatal Stepney cases included 5 in hospital and 2 in Limehouse. Of the 5 in Mile-end Old Town only 1 was recorded in hospital, and the Registrar-General calls attention to the fact that of 14 fatal cases there registered during the four weeks ending the 1st instant, only 3 occurred in hospital isolation. This failure of the local sanitary authority to adopt the only known successful method of checking the spread of small-pox among a population which includes a considerable proportion of imperfectly vaccinated persons, calls for investigation. The medical certificates relating to fatal small-pox cases continue to give (except in hospital cases) very little information as to vaccination. Of the 31 fatal cases registered last week, 10 were certified as unvaccinated and 9 as vaccinated, while in the 12 other cases the certificates gave no information as to vaccination.

The number of small-pox patients in the Metropolitan Asylum Hospitals steadily increased during the nine weeks ending the 1st instant from 137 to 256, and during the last of those weeks 54 new cases were admitted, against 58 and 78 in the two previous weeks. The Highgate Small-pox Hospital contained 19 patients on the 1st instant.

In the outer ring of suburban districts around London four fatal cases of small-pox were registered last week, of

which two occurred in West Ham, one in Chigwell sub-district, and one in Kilburn. The deaths from small-pox in the outer ring in the two preceding weeks had been five and six. The fatal case at Kilburn last week was of a child aged two years and ten months, at Stanmore-terrace, who was said to have been vaccinated two years ago, but who bore no visible marks. It would be interesting to know on what evidence the statement that the child had been vaccinated was based. Setting aside the fact of the child's dying of "small-pox, semi-confluent, seven days," the fact that the child bore no vaccination marks is conclusive that it could not have been "successfully" vaccinated within two years. It is a striking fact that at every recent examination of the vaccination marks of children in the metropolitan elementary schools the proportion of successfully vaccinated children is very far below the proportion originally certified as successfully vaccinated. Surely this state of things calls for careful inquiry, as true vaccination is thereby discredited.

Small-pox is just now unusually quiescent in all the twenty largest English towns, except London. During the last fortnight of November only two fatal cases of small-pox occurred in the nineteen provincial towns (having a population of about three millions and a half of persons), of which one was registered in Liverpool and one in Birmingham.

VOLUNTEER AMBULANCE SERVICE.

THE introductory lecture of the series which we intimated in our issue of the 10th ult. was about to be delivered by Surgeon-Major Staples, A.M.D., to the members of the Volunteer Sick-Bearers' Association, came off on Friday, the 23rd ult., at the Society of Arts. We regret that we cannot speak of it in those terms of commendation which we would have been pleased to employ. Mr. Staples began by taking exception to the title of the association, and in this we agree with him; but his suggestion of "Volunteer Ambulance Department" seems equally exceptionable. Why not call it volunteer ambulance corps or company, if it is not to be formed into a body distinct from the regiments which furnish the men composing it? After noticing the advantage which would arise from a connexion with the medical department of the regular army, and illustrating this by a supposed transport of this portion of our home defensive force across the Channel, the lecturer proceeded to give a brief and superficial sketch of the medical field-service of the armies of historic Greece and of Rome. Passing rapidly over the middle ages, he brought under notice the reforms effected in the French army by Barons Larrey and Percy in the end of the last and beginning of the present century, and wound up with a brief and very imperfect sketch of the ambulance system of our own army down to the termination of the Crimean campaign.

We cannot but think that the evening might have been more profitably employed in pointing out the nature of the duties required or the means at present employed in our service. We trust that Mr. Staples, having thus gone through the historical portion, will in future confine himself to the practical. The subject is one of so much importance, and there is so much valuable instruction needed, that we feel thoroughly provoked at such a misuse of time.

In an exhaustive work on the subject, such as Professor Longmore's "Treatise on Ambulances," it is necessary to trace their history at different periods and in different countries, but this is quite uncalled for in a course of lectures addressed to volunteers with a view to their instruction in the duties which they may be expected to perform, and the most efficient mode of affording aid to the wounded in the field. We trust Mr. Staples will not lose sight of this in his succeeding lectures, and we cannot point out to him a better example of always keeping the practical object in view than Professor Longmore's book, the title of which we have just quoted.

THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.

WE are glad to hear that the board of this hospital have determined upon the erection of a new and commodious out-patient department, for it was time that some serious step was taken to remedy what was fast becoming a grave difficulty. The number of out-patients is now so large that the waiting-room, which met the demand twelve years ago, has long ceased to be an adequate provision for the patients and their friends. Epileptics and paralytics can rarely, as compared with patients suffering from other disorders, make their way to and from the hospital unattended by some companion, and hence there is demand for space in a greater ratio than is customary. Moreover, the occurrence of an epileptic attack in a room thickly crowded with persons prone to similar seizures, is an event which not only must be expected, but which practically, as we are informed, never fails to occur on every day that out-patients are seen at the hospital. The present waiting-room, being low, cannot be satisfactorily ventilated. It has no retiring-rooms of easy access from it into which a patient could be rapidly removed out of sight of those to whom of all persons such an exhibition is undesirable. The sufferer therefore lies in the midst of the crowd till he recovers. The physicians have only one consulting-room, so that there is much delay and inconvenience attending the examination of patients, who, as in the case of paralytics, frequently need, on account of their helplessness, to be undressed by the attendants. There should of course be examination-rooms where this could be done without interrupting the work of the physician.

It seems that the board have acquired in the rear, and by the side of the existing hospital, space which represents nearly four times as much as that now occupied by the out-patient department, and upon this they propose, if the funds are forthcoming, to build a new waiting-hall, consulting- and examination-rooms, and, indeed, every requirement for carrying on the important work with as little discomfort as possible to the sick and those who bestow the gift of valuable time in the investigation and relief of their ailments.

We do not doubt that the money necessary for the purpose will soon be provided, for the hospital has always met with very generous support. From an economical point of view alone, the out-patient department is an important feature of the institution. There are large numbers of epileptic patients who attend the hospital and are thus enabled to continue their occupations and support their families. Except for medical treatment they would necessarily, in very many cases, become a burden upon the rates.

HOSPITAL STATISTICS.

ON another page will be found two interesting tables of hospital statistics, one from the Newcastle-upon-Tyne Infirmary, the other from the Azamgarh Dispensary in the North-West Provinces of India. The latter is interesting as a record of what is being done to bestow upon the natives of India the blessings of civilised surgical and medical skill, but the former table will perhaps possess a wider interest for most persons as illustrative of an important phase of modern surgical art. Fifty-nine major operations or serious injuries, with only six deaths, or 10·17 per cent., is a result that certainly speaks well both for the surgeons and the Infirmary. But what may be termed the preventable mortality was even less than 10·17 per cent. A case of primary amputation through the hip-joint died four

hours afterwards from shock; an excision of the hip-joint in a patient aged fifty-two years proved fatal from extensive bladder disease; and a case of ovariotomy died eight days after the operation from enteritis, although the wound in the abdominal wall had healed by first intention. The result is, we repeat, on the whole gratifying, but it has a dark aspect as well as a bright one. We are told that Lister's antiseptic plan of dressing was followed in every case to which it was applicable; but it is added that "secondary hæmorrhage, after the application of the catgut ligature, was markedly frequent." This latter statement furnishes material for very grave consideration. There is evidently a growing distrust of catgut ligatures. Later trials seem to confirm the experience of former years that animal ligatures cannot always be trusted to support the walls of an artery, until the reparative processes are sufficiently far advanced to obviate the risks of secondary hæmorrhage. Hopes were cherished that the improvements which Mr. Lister and others have effected in the mode of preparing the catgut ligature, and in the way of applying it, would remove the objections that belonged to the earlier forms of catgut ligatures; but recent disclosures have shown that these hopes have been but imperfectly realised. The discussion at the last meeting of the Clinical Society, and the statistical return from the Newcastle Infirmary, point but too strongly in this direction.

THE ARTISANS' DWELLINGS ACT.

THE West of England is quickly following the lead of London and Birmingham in adopting this beneficial Act, for the Town Councils of both Exeter and Devonport have passed resolutions to apply it at once to the most crowded and unhealthy portions of these boroughs, and the inhabitants of Plymouth and Bristol are beginning to inquire if they had not better do likewise. It has been determined at Exeter to pull down a "rookery" called Sherman's-court, in the west quarter of the city, between Stepcote-hill and Preston-street. These streets will be widened, and a sufficient area be left to build new houses for the accommodation of a number of persons equal to those who will be dislodged—namely, 108 adults and 136 children, who now occupy 149 rooms. It is probable that the Industrial Dwellings Company, which has already erected three large blocks of buildings in the most populous parts of Exeter, will take the site, and carry out the improvement, now that the authorities have determined to use their powers of purchase under the Act. The doomed area in Devonport is larger, for 133 houses will be pulled down, and 903 inhabitants displaced. Nearly all the houses in Dockwall-street, James-street West, James-street, and Catherine-street, with the alleys and courts adjacent, are unfit for human habitation, and furnish such a large proportion of deaths compared with those of Devonport generally, that no better part of the borough could be chosen for beginning such a valuable improvement. For the past ten years, the mortality in this district has averaged 30·4 per 1000, whilst that of Devonport, excluding the above area, has been 19·9. In some years, as in 1871 and 1872, more than twice the number of people have died here in proportion to other parts of the borough. Sir John St. Aubyn, who is the largest owner of property in Devonport, will carry out the scheme, and provide new houses, suitable for a working-class population, in sufficient number for the accommodation of those who will be temporarily dislodged, besides such new streets as may be arranged between him and the corporation. We hope that no opposition to the carrying out of these two great improvements will be made in Parliament, and earnestly urge on the authorities of other towns, in which similar unhealthy and crowded localities exist, to follow, as quickly as possible, in the same path.

TWO CASES OF DOUBLE DISTAL LIGATURE FOR INNOMINATE ANEURISM.

ON Thursday afternoon last, at Charing-cross Hospital, Mr. Barwell ligatured, under antiseptic precautions, the common carotid and the third part of the subclavian arteries on the right side in two cases of innominate aneurism. The first patient was a delicate-looking woman about thirty-five years of age who had an aneurism, prominent and pulsating, just below the inner end of the right clavicle. Nitrous oxide gas was respired for a few minutes, and anæsthesia completed by the inhalation of ether. Mr. Barwell then tied the right common carotid artery with a catgut ligature, which was cut short; after which the wound was drawn together with silver sutures, and dressed antiseptically. The subclavian artery on the same side was then dexterously and rapidly tied with catgut, and the wound closed. The second case was that of a man aged forty-six, who had been a soldier, and in whom there was a syphilitic history. This case was altogether more serious than the preceding one. The aneurismal sac was very large, and extended into the root of the neck. The sternal end of the clavicle was pushed upwards and forwards, and strong pulsation could be felt under the lower attachments of the sterno-mastoid muscle. Anæsthesia was produced by the same means as in the former case, and the right common carotid artery was secured with catgut; but, in consequence of the great prominence of the clavicle, the subclavian artery lay very deep, and there was some difficulty and delay in getting the needle round it; this, however, was eventually accomplished by passing the needle from above downwards, pulsation at the wrist ceasing immediately and completely when the ligature was drawn tight.

Mr. Barwell has had three cases of this nature within a few weeks. A report of the first case will be found in THE LANCET for November 17th.

POISONING BY CHLOROFORM.

A DEATH during the inhalation of chloroform, preparatory to undergoing an operation, has occurred in a village near Llanelly, South Wales. The patient, a collier, twenty-nine years of age, in fairly good health, suffered from fistula in ano, for which Messrs. Buckley and Thomas, surgeons, determined to operate. After inhaling the anæsthetic for a few minutes, the patient became suddenly blanched in the face, and breathed feebly, and in spite of the endeavours of the surgeons, who persevered for an hour in performing artificial respiration, died. The autopsy revealed a hypertrophied condition of the heart, and at the subsequent inquest the jury returned a verdict of "Accidental death, during the administration of chloroform."

Another case, in which recovery occurred, is reported:—A patient took in the morning, about half-past eleven, one ounce of pure chloroform in some coffee. He was called about a quarter of an hour after; he replied he was sleepy and wished to lie in bed. The patient was not seen by any one until half-past one, when his wife went in and found him sleeping so soundly and heavily that no amount of shaking or shouting could rouse him in the least. She left him in a small dressing-room on the bed in a comatose condition, and summoned medical aid. As she had to procure a cab and send some four miles, it was ten minutes to four o'clock before aid arrived. The patient was found cold, pulseless, and not perceptibly breathing. He was lifted at once into a large adjoining room, and placed across the bed with his head towards the windows, which were at once

opened to their fullest extent. The chest was bared, and the Silvester method for restoring animation vigorously and perseveringly resorted to. The first effect was violent diarrhœa, next faint sobbing, fitful respiration, then stiffening of the limbs to a slight extent, succeeded by copious vomiting, then stertorous breathing, giving way gradually to slight twitchings of the limbs, muttering, anxious questioning, and at ten minutes to six o'clock complete consciousness. The efforts for restoration were never relaxed, except that the Marshall Hall method was now and then substituted for the Silvester. The face was pale throughout, there was no perspiration, the pupils were contracted, and the eyes were not suffused.

PAYMENT AND DUTIES OF MEDICAL OFFICERS OF HEALTH.

THE salaries of medical officers of health are so insignificant in many places that it is quite apparent they are not intended to perform any duties, but are appointed solely in obedience to the commands of the Local Government Board. At Redruth, a large mining town in Cornwall, for instance, the medical officer of health is now paid £5 5s. per annum, whereas his salary was fixed at first at £25. The members of the local Board of Health consider that the duties are performed as well now as formerly, and this, we suppose, must be interpreted to mean, as no report of his work is furnished, that little or nothing is done, or, in their opinion, required to be done, by such an officer. Those who know mining districts in general, and Redruth in particular, and have studied the mortality returns, will not coincide in such an optimist view. Either the necessary work should be done, and the medical officer fairly paid for his time and trouble, or the money of the ratepayers should not be expended on a nominal appointment, without any duties attached thereto. Dr. Hudson, as a member of the local board, made an energetic protest against the continuance of such a proceeding, and we hope that his views will be duly considered, not only by the inhabitants of Redruth, but of numerous other places where similar arrangements prevail. A combination of districts is the only safeguard against local prejudices and inefficient sanitation, and all hygienic reformers should urge its adoption.

SANITARY INSPECTION OF TENEMENT PROPERTY.

AT a recent inquest held with reference to a death in Frances-street, Lambeth, evidence was given which points to the necessity for more systematic inspection of all house property, in urban districts, let out in tenements. The inquest was held upon the death of a woman aged seventy-six years, which, according to medical evidence, was caused by inflammation of the lungs and heart disease; the woman was very much emaciated, and Mr. Monday distinctly asserted that her death had been accelerated through sleeping in a room "which was not fit for a dog to lie in." It was stated that the deceased had been in receipt of 2s. 6d a week, but that owing to her dirty habits the guardians had stopped her allowance with a view to her removal into the workhouse. The coroner (Mr. W. Carter) expressed a hope that the condition of the houses in Frances-street would receive the attention of the local sanitary authority, a hope which will probably now be realised. It is still more important, however, that measures should be adopted to avoid the scandal and danger to the community inseparable from such a catastrophe as the death of this poor old woman, partly from living in a room "not fit for a dog to lie in." Sanitary authorities of poverty-stricken neighbourhoods are too apt to disclaim responsibility for the results of the degrading filthiness of the lowest class of tenemented houses; it is clear, however, that responsibility must rest somewhere. Primarily it rests with the owners of such property, who should not be allowed to escape the obligations of ownership; and, secondly, with the local sanitary authorities, whose clear duty it is to enforce all needful measures of precaution, and thus to render impossible such a tragedy as that which recently occurred in Frances-street, Lambeth.

UNIVERSITY COLLEGE MUSEUM.

DURING the last few months some important additions have been made to the anatomical museum of University College. The curator, Dr. Ewart, has prepared and mounted in plaster-of-Paris a series of dissections similar to those used at the examinations of the College of Surgeons, and it is intended to increase the number of these dissections. To assist the students in the use of these preparations, Mr. R. Quain has had them drawn, and the drawings, which are well executed in colours, with all the objects named, are hung up close to the dissections. A set of bones, with the attachments of the muscles clearly marked on them, mounted in bottles, has also been recently added. As the muscular attachments have been marked by the curators, and not, as is so often the case, by the preparer of the bones, they are accurate, and will prove useful to the students. Braune's life-size coloured plates have been framed and hung up for reference. A new cabinet, containing Liston's collection of surgical instruments, has just been erected. Some may remember seeing these at the 1851 Exhibition; they are of great interest, and will repay a visit. It seems a pity that they should not have been placed in the museum before. We are glad to find that a catalogue of the museum is in course of preparation, and, indeed, will soon be ready. We hear that Mr. R. Quain bears the expense of its printing. A good catalogue cannot fail to add very greatly to the value of the specimens.

SYRUP OF CHLORAL (LIEBREICH).

OUR attention has been called to the syrup. chloral. (Liebreich) introduced by Messrs. Corbyn. It is prepared in Germany by Prof. Liebreich, and bears a label containing the extraordinary statement that "It is the only preparation on which the profession can rely for the production of the therapeutical effects of the remedy." Whatever credence may be given to the statement that the evil effects of chloral are invariably due to its impurity, a statement which certainly has not been proved to be true, the assumption that pure chloral cannot be prepared by English manufacturing chemists appears to us a most extraordinary one, and certainly reflects in a very unpleasant manner on the ability or the honesty of English chemists. A serious objection to the above-named preparation is that it is only one-third the strength of the syrup. chloral. (B.P.) If it should come into use there will almost certainly be some fatal mistake in dose made by those who, after taking the German, take some of the English preparation, and then, probably, the accident will be ascribed to the impurity of the latter!

FEEDING PER RECTUM.

AN article appears in the *Deutsche Zeitschrift für Praktische Medicin* (No. 44, 1877), in which Dr. Kauffmann draws attention to the excellent results he has obtained from the plan of feeding the patients with pancreas and meat in cases of persistent and incurable intestinal obstruction. He states that he has had nine patients in the Kölner Bürger

Hospital, seven of whom were suffering from cancer of the œsophagus, one from cancer of the pylorus, and one from chronic ulcer of the stomach. In all of these a cleansing enema was administered in the morning, followed by the introduction into the rectum of a mixture of a pound of finely divided beef, and one-third of a pound of finely minced pancreas, the whole being freed from fat and connective tissue. Half of this quantity was used at noon, and half at 6 P.M. The results were excellent; a solid well-formed, healthy evacuation was discharged every day. The patients were able to walk about, and lived for nine or more months.

SANTONIN AND STRYCHNIA.

ABOUT two years ago we thought it our duty to caution our readers regarding the possible evil consequences of comparatively small doses of the favourite anthelmintic santonin, and affirmed that the administration of a very few grains sometimes produced convulsions of the gravest nature in children. We did not at the time hazard an opinion as to whether the poisonous effects observed were due to a change which the powder had undergone (e.g., it readily oxidises in a strong light), or to the admixture of a more potent drug; but recent events show that the latter view is probably the correct one. We find reported in the *Canadian Pharmaceutical Journal* brief particulars of two cases of poisoning from santonin, which on analysis was found to contain a large proportion of strychnine. One case terminated fatally, and in the other death was only averted by the most prompt and energetic measures. An action at law is pending with regard to the latter case, at the conclusion of which we shall no doubt obtain some interesting information. Meanwhile we would call the attention of the wholesale drug houses to this matter, and suggest the desirability of examining stocks of santonin.

THE SMALL-POX OUTBREAK AT FARINGDON.

WE asked last week with reference to this outbreak in Faringdon, How came it that the disease was permitted to spread as it did from the first case? What action did the sanitary and vaccination authorities take in the matter? Has Faringdon any means for isolation? We have been favoured with a partial reply to these questions. Our information relates to certain admonitory notices issued, or proposed to be issued (we are not certain which) by the sanitary authority, but of public means of isolation and of disinfection, and of the action of the vaccination authority, not a word is said. Surely this is a case for inquiry for the Local Government Board, and we would ask those resident, who, in view of the apparent inefficient action of the sanitary authority during the outbreak, are agitating for a Local Board, to memorialise the Local Government Board for a medical investigation of the circumstances attending the outbreak.

LACTIC ACID AS AN HYPNOTIC.

LACTIC ACID, originally discovered by Scheele in fermented milk, is one of the products of the metamorphosis of tissue in muscle, and was suggested by Preyer as an hypnotic on theoretical grounds. Dr. Mendel has lately carried the theory into practice, giving from one to two drachms for a dose in the form of lemonade sweetened with sugar, and diluted, or in double those doses as an enema, neutralised with the same quantity of carbonate of soda, since in its pure state it acts as an irritant to the intestine. It is said to act best when the conditions preventing sleep are of a mental nature, whilst it is inoperative if the sleeplessness is occasioned by pain.

A REAL case of burying alive has taken place in Naples. Some time ago a woman was interred with the usual ceremonies, and soon afterwards, the grave in which she had been deposited having been opened for the reception of another body, there were presented appearances which proved beyond doubt that the woman was not dead when buried. She had torn her clothes to pieces, and even fractured her limbs, in her efforts to release herself after recovering consciousness. The Appeal Court of Naples has just sentenced the doctor who signed the certificate of death, and the Mayor who sanctioned the interment, respectively to three months' imprisonment for "involuntary manslaughter."

THE number of deaths registered in London last week amounted to 1579, showing a mortality-rate of 23·3, one slightly higher than that of the previous week. Of the deaths from the seven principal zymotic diseases, 31 were due to small-pox, 81 to measles, 52 to scarlet fever, 5 to diphtheria, 27 to whooping-cough, 36 to different forms of fever, and 16 to diarrhœa. The fatality of diseases of the respiratory organs still shows a tendency to rise, the deaths due to them last week numbering 417, against 313 and 409 in the two previous weeks respectively.

A BARQUE has arrived at Plymouth with two of the crew suffering from scurvy. The disease, however, has not presented itself in its most virulent form. The Board of Trade medical officer, has, it is reported, instituted an inquiry into the cause of the outbreak, and finds that there was an ample supply of lime juice, preserved meats, &c., on board, and that there was nothing in the diet of the men which could have produced the disease. The outbreak consequently assumes a somewhat mysterious character.

THE sanitary condition of Chobham would appear to be very unsatisfactory, to judge by a recently issued report of the medical officer of health for the district. During a thorough inspection of the village by this gentleman he did not find a single well of water that was not, in his opinion, contaminated. Certain recommendations have been made by the medical officer which should be adopted by the rural sanitary authority without delay.

DURING the Centennial Exhibition in Philadelphia it appears that a very large amount of illness existed in the city, some particulars of which have been recently given by the *Philadelphia Medical Gazette*. At the Centennial Hospital no less than 6463 cases of injury and disease were treated; and among the Japanese exhibitors, who acutely felt the change of climate, 18 per cent. suffered from enteric fever.

IT may not be uninteresting to medical superintendents and others to give the cost of maintenance at some of the establishments under the control of the Metropolitan Asylums Board during the past half-year. At Leavesden Asylum it was 1s. 1½d. per head daily; at Caterham 1s. 2¾d.; at Clapton Asylum 1s. 11¾d.; and at the *Exmouth* training-ship 1s. 10¼d. per head daily.

WE are gratified to be able to contradict a groundless rumour to the effect that Sir Wm. Muir had resigned. It is pleasant to know he has not any such intention. Sir Wm. Muir discharges his official duties at the Army Medical Department as usual.

THE Fulham Hospital, which was opened for the reception of small-pox patients on the 10th of March last, is now closed. Of the 629 patients admitted, 303 were convalescents transferred from other establishments.

THE Board of Delegates for the management of the Hospital Sunday Fund have brought their labours for this year to a close. At their final meeting last week it was stated that the Fund had received £275 more than last year, while £350 less had been spent, and that the awards were made three months earlier than after the collection in 1876.

AN inquiry has recently been instituted in Cork by the Local Government Board in reference to the prevalence of fever; and from the evidence given up to the present, it appears that the increased number of cases of enteric fever is due principally to defective drainage and bad sanitary arrangements.

IT has been reported to the Uxbridge Rural Sanitary Authority that 208 cases of scarlet fever had lately occurred in the parish of Norwood, exclusive of 40 cases at the St. Marylebone Schools.

SANITARY SCIENCE IN GERMANY.

I.

WITHOUT placing ourselves in the position of those who are guilty of throwing stones whilst living in glass houses, we cannot but feel with some satisfaction that in most sanitary arrangements of a public nature we stand a long way in advance of our continental neighbours. With few exceptions our streets are cleaner and better lighted; our houses better warmed, and drained, and ventilated; our supply of water larger and of better quality than any that may be seen abroad. Here and there no doubt great absurdities might be pointed out in our system—none greater, perhaps, than that law which can be put in force to compel the formation of a main drain, and can compel also each house to have its own system of drainage, but which is powerless to compel either the owner of the house or the corporation of the town to join the domiciliary drain with the main one. Still, on the whole, in large towns and cities, something has been done to render them habitable, to extend the duration of life, and to prevent the development of disease. Our example has not been without fruit, and with more intelligent views in regard to the nature of disease, the advantages of sanitary science are everywhere beginning to make themselves felt. We have lately received the first handbook published in Germany on Public Health,[1] and as its contents are particularly interesting we shall take the liberty of abstracting some of its more important parts, from which, as is usual in any subject treated with Teutonic patience and care, it will be found we may ourselves receive instruction.

We may remark at the outset that the author has not, as is too frequently the case with German writers, limited himself to a consideration of the progress made in his department by his own countrymen, but has evidently paid the closest attention to the hygienic improvements that have been made in this country and to our literature, and has produced a work which will add to his reputation, and which we should be glad to see translated, as our own literature, except in the form of Blue-books, is in this respect rather scanty.

In attempting to give our readers a brief abstract of some of the more important subjects discussed, we feel that we hardly do justice to the author, as it is difficult to remove any part from the context without spoiling the whole.

In the first chapter Dr. Sander treats—1. Of what should be the aim and object of the department of public health in a State. 2. Of our knowledge of avoidable disease. 3. The history of public hygiene.

He commences with some remarks on the proper nomenclature of his subject, and at the outset discards the term "hygiene," apparently because it was originally employed adjectively in Greek, did not pass into the Latin tongue, and was only first used by Galen; all of which reasons, we think, are feeble, and curiously illustrative of the tendency of the German mind to retain their long, uncouth, though expressive phraseology, in preference to accepting a new foreign word. After referring to the great increase in the population of certain countries, he states that Rümelin has calculated that at the present rate of increase, and notwithstanding emigration, Prussia, in the course of 300 years, will have 650,000,000 population; and even this is far exceeded by ourselves, a calculation which he gives having shown that if avoidable causes of death were removed, especially in infancy, in eighty-seven years all England would be as populous as London is now. At this rate Lord Dufferin's discovery that Canada contains some open ground, and Stanley's that the centre of Africa is habitable, do not come an hour too soon, and a company had better be formed at once for promoting settlement in those regions.

He then proceeds to treat in general terms of avoidable disease. Using our mortality tables, he shows that the average mortality deduced from the returns of 623 registration districts in England is 22·4 per 1000 per annum, whilst in 54 of these districts it did not exceed 15·17 per 1000. If all men lived to 80 years of age, the yearly mortality would be 12·7 per 1000. The difference between 12·7 and 17 per 1000 Prof. Sander puts down to preventable disease. He discusses at length the value of the figures obtained in such tables, and in the course of his remarks gives numerous references to statistics obtained from German towns and districts.

On the question of Putrefaction and Fermentation the author gives a very good *résumé* of the opinions now held, showing how some, including so cautious an observer as De Bary, consider that bacteria are the cause of decomposition, essentially on the ground that the nature of the decomposition can be directed by the nature of the spores sown in certain fluids; whilst other observers of equal eminence, as Helmholtz and Hoppe-Seyler, maintain that bacteria only, in general, accompany, but do not induce, the process of putrefaction, since some fermentations and metamorphoses occur without their presence. Dr. Sander applies these conflicting views in an interesting manner to the origination of disease, and quotes the observations of Panum, Hiller, and others, showing that the germs—using the term in a very broad sense, so as to include proteinous particles even—are extremely resistent to high temperature in some instances and to chemical agents in others. The general result is, as Hallier expresses it, that in ferments of a putrefactive power we have not to deal with any single substance, but with a number, varying even with the stage of decomposition. Septicæmia and diphtheria he considers the only diseases directly proved to be due to putrefactive impregnation of the system, though he quite admits that scarlet fever and the zymotic affections of Dr. Farr's classification are each induced by a specific cause. He makes a second group of cholera, and a third of malarial diseases. The question of the mode of production of cholera is very fully discussed, in regard to which the author appears to be in accordance with Pettenkofer, whose views we some years ago took occasion to lay before our readers, and which are sufficiently known. An important section is devoted to the consideration of the production of phthisis by various unhealthy employments, and of the effects on

[1] Handbuch der öffentlichen Gesundheitspflege. Von Auftrage des Deutschen Vereins für öffentliche Gesundheitspflege. Verfasst von Dr. Friedrich Sander, Oberarzt des stadtischen Krankenhauses in Barmen. pp. 500. Leipzig: Hirzel. 1877.

children of close rooms with much floating dust. The next section, which we shall not here attempt to touch, deals with the history of the interference of the State in matters of public hygiene, and completes the first part of the work.

The second part deals with the special subjects of Air, Water, Soil, and Food; with the Construction and Arrangement of Houses, Hospitals, Schools, Prisons, and Cemeteries; with the means to be adopted for disinfection; and with the advantages and disadvantages of Quarantine and of Vaccination.

The section on Air commences with a brief physiological introduction, in which the importance of its purity for the purposes of respiration is insisted on. The quantity of oxygen necessary for a man at rest is stated to be about 2 grammes (or 31 grains) every four minutes, which is equivalent to 750 grammes per diem, and 550 kilogrammes, or about 1100 lb. per annum; the quantity of carbonic acid gas being nearly 850 : 900 grammes daily. Speaking of ozone, he notes its frequent absence in the air of sitting-rooms, and discusses the two opposite views—that it is an invigorating agent, and that it is a producer of catarrhal affections; and whilst acknowledging the accuracy of Wolffhügel's observations, that it is absorbed by the nitrogen-containing dust that collects on furniture and the walls of dwellings, he doubts its value as a disinfectant, and does not place the least reliance on the observations supposed to demonstrate a deficiency of ozone in the air in periods of widespread epidemic affections. The observations of Angus Smith on the air of large towns are very well condensed, and need not here be alluded to. In speaking of the moisture of the air, he states that it rarely amounts to 1 per cent. This must, however, apply to Germany, since the proportion in this country is about 1·4 per cent. To the dryness of the American air, owing to the prevailing winds being south-west and blowing over a wide expanse of country, he attributes the nervous excitability and feverish activity of the Americans, their height and slender build, and supports his opinion by reference to the observations of Falk, which show that rabbits kept in a chamber with artificially dried air soon suffer from dyspnœa, and are frequently attacked by epilepsy, though when the air was saturated with watery vapour no ill-effects were observed. The air in crowded halls is very near saturation with watery vapour, in proof of which he relates an amusing story told to him by a Russian officer, who, in very cold weather, opened a window in a concert-room for the purpose of ventilation, when a shower of snow immediately fell on the audience. He very properly lays great stress on the organic impurities that exist in the air of rooms when many people are crowded together. These organic impurities are recognisable by the sense of smell long before their presence can be shown by chemical analysis. He agrees with Pettenkofer in thinking that the first perception of a disagreeable odour is coincident with a 0·06 per cent. of carbonic acid gas, and that this percentage must therefore be regarded as the highest compatible with moderate purity of the air. It is not generally known that considerable difference exists in the effects upon the air of different sources of artificial light. Thus, in a room of moderate size, and with flames of equal illuminating power lighted for four hours, the flame of petroleum caused an increase of 1·8, of gas 1·5, and of oil 1·2 per thousand. But, as a rule, gas is more freely used than oil or petroleum, and consequently the air is rendered much more impure. The researches of Erismann on artificial light go, however, to prove that, taking it altogether, if the lamps be of good construction, those made to burn petroleum spoil the air the least; and this is satisfactory, since such lamps are daily becoming more used, especially by the poorer classes of the community. Stearine candles, with equal light, are more injurious than any other material. In regard to general ventilation, Dr. Sander, after discussing Miss Nightingale's, De Chaumont's, Pettenkofer's, and others' views and statements, considers 60 : 100 cubic metres to be the average quantity per head per hour, which would satisfy all the requirements of artificial light and work; and if 100 cubic metres be allowed, it is on the supposition that the space to be ventilated is 33 cubic metres per head. The different density of the air in different places has scarcely been sufficiently regarded in reference to the absolute quantity of oxygen respired. Escherich, however, has lately shown that supposing an adult in Hamburgh at the level of the sea to inspire 1271 kilogrammes of oxygen in the course of the year, he would only inspire 1183 kilogrammes at Munich, which is 518 feet above the level of the sea, though, when the mean temperature of the year is taken, the difference is somewhat less. The author enters very fully into Pettenkofer's observations, showing how large an amount of air passes through the ordinary walls of a building. Thus, in one of his experiments, it appeared that after all chinks and fissures in the door and windows had been carefully stopped in a room having a capacity of 75 cubic metres, the temperature inside being 18° C., and the temperature outside — 1° C., the hourly amount of ventilation was no less than 54 cubic metres, whilst, when the rifts were not closed, the supply of fresh air, though greater, amounted only to 75 cubic metres. We shall not extract that part of the book, since a translation of Pettenkofer's statements has already appeared, and we shall only add that we are glad to find that sensible views in regard to the opening of windows during the day-time, and, wonderful to say, at night also, has found an advocate, though a somewhat hesitating one, in Dr. Sander. We only hope his countrymen will adopt, as we are sure they will profit by, his recommendation. Some space is devoted by the author to the abuse of the stove as a means of heating and ventilation which has little practical application in England, though we cordially agree in all that he says in condemnation of it. He discusses at length, and in an interesting manner, the plan of central heating both by water and heated air.

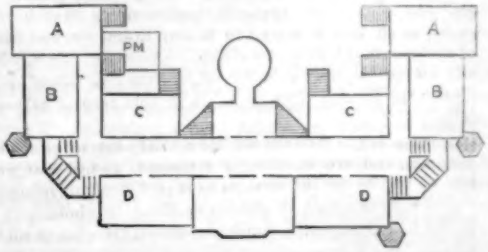
As we have said, the book teems with references to English writers. Simon, Buchanan, Russell, Farr, Parkes, Gamgee, Rawlinson, and many other writers on hygiene are laid under contribution, as well as such authors as Buckle and Herbert Spencer; and, remarkable to say, the names are uniformly spelt correctly, showing that the author has not applied to these sources of information at second-hand.

THE WESTMINSTER HOSPITAL.

WITH one exception all the wards of this hospital are now open for the reception of patients, and before long the full work of the hospital will be performed with the increased facility afforded by the recent improvements.

Since hospital alteration is a subject which is just now agitating the minds of many hospital committees, we shall endeavour to give the reader some idea of what has been done at the Westminster Hospital, in the belief that the study of such alterations is full of instruction.

The arrangement of the building, as shown in the annexed diagram, is somewhat peculiar. The structure occupies



The plan is at the level of the second floor, and does not profess to be absolutely to scale. The additions are shown by dark shading.

three sides of a parallelogram, the fourth side of which looks towards the Stationery Office, an interval of some twenty

feet intervening between that building and the north ends of the hospital wards. The front angles of the building are cut out, as it were, and into them are built the staircases. This is one of the best features of the building, for the staircases have an abundance of independent ventilation, and are not, therefore, so liable to serve as ducts for the conveyance of undiluted hospital air from one floor to the next. Each floor is occupied by a corridor, out of which the wards open. The hospital is very solidly built.

In the area enclosed by the hospital are the post-mortem room, dissecting-room, chemical laboratories, physiological laboratory, and lecture theatre. The out-patient department and dispensary, as well as the kitchen and its offices, are in the basement. The alterations, which have been carried out by the architect, Mr. Stephen Salter, consist mainly of the reflooring of the wards with teak, and the erection of turrets for the reception of the waterclosets and sculleries. Two triangular rooms have been added, one on each side of the operating-theatre. The teak flooring is a vast improvement to the appearance, and also, there can be little doubt, to the healthiness of the wards. This part of the work is excellent, and leaves nothing to be desired. The turrets are nine in number, three in front and six behind. Those in front are a decided addition, architecturally, to the building, and it is gratifying to see that in the hands of an ingenious architect so unpoetical a purpose can be served, while our æsthetic longings are satisfied. The three turrets in front are octagonal, with Gothic gargoyles; the six behind are rectangular, and without ornament. Seven of the turrets contain, on each floor, a watercloset and scullery, approached by a ventilated lobby. The remaining two turrets are occupied by bath-rooms. The waterclosets in the rectangular turrets are a trifle more than 5 ft. by 3 ft., and each contains one seat and a slop-sink. The slop-sink, as the patient sits on the watercloset seat, can be easily touched by him, and if he leans forward his head will be over it; and it projects (necessarily) so much from the wall that the door cannot be fully opened. Thus, it will be seen that the space allotted for this accommodation is exceedingly small. We need not dwell upon the manifest inconvenience of having the watercloset seat, which is for the use of the patients, and the slop-sink, which is for the use of the nurses, enclosed by the same door; nor of the danger of placing a slop-sink where its effluvia may be inhaled by the occupant of the watercloset seat. In the octagonal turrets, the waterclosets occupy even a smaller area than in the rectangular turrets, but the arrangement is better. The slop-sink, being beyond the watercloset seat, is removed from the close proximity of the occupier of the seat, and allows the door to be opened. The nurses agree in saying that these waterclosets are more convenient than the larger ones. There is need for a proper supply of shelves, &c., for the waterclosets, it being manifestly undesirable that chamber-pots, bed-pans, and urine-bottles should be stowed away on the closet-seat or on the floor, as we found in some of the closets. Stools which have to be kept for inspection should have some definite place assigned to them, and this certainly should not be actually within the closet itself, unless we wish to see typhoid spread from one patient to another.

The sculleries in the rectangular turrets measure 10 ft. by 6 ft. 3 in., those in the octagonal turrets being smaller. The space, small as it is, seems to be ample, and the testimony of the nurses is also to this effect. In these there is a necessity for special arrangements for stowing articles. For example, a nurse's bonnet or shawl should not be hung from the holdfast which is intended for the window-line, nor should brooms be suspended from a plate-rack. We mention these trifles because we think they are of prime importance, and are certainly the cause of the untidiness, if not of the unhealthiness, of many hospitals. The Westminster Hospital is no worse in this respect than many others; it would compare favourably with most. "A place for everything, and everything in its place," should be, we believe, the first maxim of hospital organisation. Every brush, broom, plate, or other utensil should have its definite shelf, rack, or peg, and these matters ought all to be seriously considered, and as little scope as possible left for individual fancies. We believe that the authorities of the Westminster Hospital are quite right in keeping their sculleries small, but if they are small no effort must be spared to make them *convenient*, which merely means that they are to be plentifully supplied with suitable shelves, &c.

Next, as to the ventilated lobbies. Great efforts have been made to provide for the cross ventilation of the lobbies leading to the waterclosets and sculleries by means of opposite windows, the theory of the ventilated lobby being that any foul air escaping from the door of the closet or scullery is immediately swept out of the lobby by the cross current of air from the windows. If this purpose is to be efficiently served the cross ventilation should extend from floor to ceiling, and the windows, or other ventilating apertures, should be always opened. Now, at the Westminster Hospital, in the rectangular turrets, the windows, which are the only ventilators, do not come lower than within six feet of the floor, and in two of these lobbies we found, what we have often found elsewhere, that the windows on both sides were completely closed. The fact is that this cross current of air is, and always must be, almost intolerable both to nurses and patients. The ventilated lobby is a capital thing in theory, but our observations upon it in practice, both here and elsewhere, make us doubt whether it is of much value, since just at these times of year, when it is most needed (i.e., in the winter months, when the ward fires are large, and the current from the closet to the ward is consequently apt to be very strong) the discomfort of the through draught is found unbearable. The proper ventilation of the closet itself is of the greatest importance, and we are not sure whether Mr. Saxon Snell's invention for the thorough ventilation of the closet-pan will not be found more effectual than the so-called ventilated lobby.

It is of great importance that the separation between the scullery, where food is sometimes kept, and the closet, should be complete, and we were surprised to notice that in two of the turrets the partition-wall does not go to the top, but stops short, in order to accommodate a water-tank. The closet and scullery occupy in this case a common air-chamber, and it would look as if their water-supply is from a common source. This needs only to be pointed out in order to be rectified. It is difficult to understand how such a structural defect could have been allowed to pass.

The bath-rooms seem all that can be desired. Here, also, there is a necessity for pegs, shelves, rails for drying towels, &c. We would suggest that the doors of the cupboards below the basins should be removed, on the principle that all corners for stowage should be freely ventilated, thoroughly lighted, and always open to observation. There is need also for a "scupper" at one angle of the floor, in order that water which is spilt may be easily brushed away. The waterclosets, bath-rooms, and sculleries, have all tiled floors. There is one little matter of detail which is worth noticing. In the front wards, which have the octagonal turrets, entrance to these turrets is gained by a lobby door built out into the ward. This lobby door has a flat roof, as such doors usually have. Now, if the roof of this door had sloped from the wall, any dust collecting upon it would at once have been visible to the eye, and very easy of removal. We know from experience how dust is liable to collect upon the tops of lobby doors &c., and we think it should be a principle in hospital construction that the tops of such doors and of cupboards &c. should be sloping, and should present their entire surface to the eye.

At present there are five wards in the Westminster Hospital (those fitting into the angles of the parallelogram, and marked C in the diagram) *all* the windows of which look into the back area, which receives the emanations from twelve waterclosets, six bath-rooms, a dissecting room, a post-mortem room, two laboratories, and a lecture theatre. The post-mortem room actually has its chief ventilator between the two western turrets. There is, it is true, both to the post-mortem room and the dissecting room, a small ventilating pipe which is carried to the top of the building, but there are other and much larger apertures of exit. We think a good-sized chimney should be provided for both these rooms, up which a constant current should be ensured by means of gas-burners. This plan has been very efficient for ventilating the post-mortem room at the Charing-cross Hospital. Another and perhaps a better plan would be to remove one or both of them to the upper storey.

It is, we think, a matter for regret that, in devising these

alterations, no plan was formed for piercing the angles of the parallelogram, and thus admitting the free passage of air to and from the back area with all directions of the wind.

The hospital has been in great part provided with an extra storey, which is devoted to wards for infectious and noisy cases, to two day rooms for convalescent patients, and some nurses' rooms. These nurses' rooms are approached by an independent staircase. This extra storey is, there can be no question, a very great gain.

We trust that the Committee of the Hospital, now that they have done so much to improve the accommodation for in-patients, will do something for the out-patient department, which is in the highest degree unsatisfactory. It is situated, as we have said, in the basement, and is consequently very dark, and difficult to ventilate. The darkness is rendered far greater than it need be by the presence of a heavy stone parapet (or, perhaps, wall is the more suitable term), some six feet high, which protects the area surrounding the building. If this were removed, and replaced by a light iron railing, we think that the rooms in the basement would be far less gloomy. There are four waiting-rooms for patients, and three consulting-rooms (medical, surgical, and dental). They are all long and narrow, 10 ft. 6 in. high, and with windows only at one end. The worst of these rooms is the female surgical waiting-room, which is 22 ft. long, 10 ft. wide, and 10 ft. 6 in. high. It depends for ventilation on the window, which is at one end, and one Tobin's tube. It is heated by hot-water pipes. We noticed that it contained eight forms, each of which is capable of holding seven persons. Now the cubical contents of this room amount to 2310 ft., and if its sitting accommodation is ever all occupied—i.e., if the room ever contains 56 patients,—each one of them will have 41·25 cubic feet of space. The other rooms are not much better. We went one afternoon into the male medical waiting-room, just after it had been emptied of patients, and the smell of it was such as one could not easily forget. Surely some improvement might be made here by enclosing the front area, which varies in width from about 20 ft. as a maximum, to 7 or 8 ft. as a minimum. In the surgical consulting-room this has been done, and one can easily see how much could be effected in this way. The governors ought to recognise the fact that it is hardly fair either to patients or doctors to ask them to sit for hours at a time in these gloomy ill-ventilated rooms.

MEDICAL ASPECTS OF THE WAR.

WINTER has not yet fully set in in Bulgaria. Snow alternates with rain in the Balkans, and the men of both armies are exposed to great hardships from the unsettled weather. Nothing accurate appears to be known of the state of the Turkish forces shut up in Plevna, but except it may be in some of the detached corps on special service, the condition of the Russian troops in the war continues on the whole good. Speculations are now being entertained of the Danube remaining open during the winter, so late is the onset of severe cold delayed. The arrangements of the Russians for maintaining the passage of the river intact have had to be modified in view of this possibility.

The Russian Red Cross Society has published an account of its receipts and expenditure for the nine months ending the 12th October. From this it would appear that the receipts amounted to 4,254,647 roubles, and the expenditure to 3,373,842, leaving a balance in hand at the date named of 880,804 roubles. The expenses of the Society for the nine succeeding months are estimated at 13,432,339 roubles. The Society, at the date of its report, had under its maintenance 12,748 permanent (stationary?) beds, and 1636 transportable beds. In addition there were 6000 permanent beds, and 616 transportable beds, maintained by private charity, making the total number of beds under the Red Cross organisation 21,000.

The Ladies' Committee, formed in Berlin in aid of the sick and wounded of the Russian army, has published a report of its proceedings for the four months May—August. From this report it appears that the committee has expended 21,726 marks in organising and despatching to Roumania a sanitary train of twelve carriages, arranged for eighty patients, with its equipments complete.

An American Society of the Red Cross has been organised in New York to aid the Russian sick and wounded.

The Committee of the Evangelical Churches of St. Petersburh has issued a special appeal to enable it to send a railway-waggon load of Christmas-boxes, in the shape of little luxuries and articles of warm clothing, to the Russian army in Bulgaria.

Among the recent honours conferred for distinguished service in the field with the Russian army, we read the following:—Fourth-class of the Order of St. Vladimir, Dr. Paschkévitch, surgeon and superintendent of the hospital at Piatigorsk; Dr. Koulétchew, principal medical officer of the Crimean rigiment of infantry; Councillor of State (actual), Dr. Vyvodzew, principal medical officer to the temporary military hospital No. 70; and Dr. Sklyfassovsky, professor in the Imperial Academy of Medicine and Surgery.

At a recent meeting of the Society of Russian Physicians, Professor Sklyfassovsky gave an account of his recent mission to the seat of war.

We have received the following letter from our correspondent at Bucharest:—

"Bucharest, Nov. 7th, 1877.

"Since writing to you all has gone well. Dr. McNalty (of the National Aid Society) and Mrs. Mansfield have a section of the Military School, where they have established a hospital, and they are doing good work. Our own little hospital, mainly supported by funds confided to me [Mrs. Mawer], is very successful. We have had complicated cases amongst our wounded, dysentery, fever, inflammation of lungs, &c., but all are recovering, both from wounds and sickness. The health of the patients was in a very low state, but with cleanliness and generous diet they are now all one can wish.

"Thanks to Mrs. Mansfield's exertions we have the sanitary trains resumed at last. Up to this time they have been without stoves, but owing to this lady's exertions, sufficient money has been raised to purchase and fix them. Mr. Vachell and Mr. Douglas have arrived here, the former in very bad health, and obliged to take to his bed. Mr. Douglas has just been to see us under the charge of his Russian escort. Dr. Mawer found Mr. Vachell very ill when he went to see him this morning, and pronounces him quite unfit to go forward to St. Petersburg, as they are to do, I believe, to-morrow.

"Saturday.—I have just heard that, through Colonel Mansfield's intervention, the two prisoners are relieved of surveillance, and are put on parole. He has also arranged so that they do not leave Bucharest at present."

Lord Blantyre has favoured us with the following extracts from a letter of Mr. Consul Zohrab. It contains, we regret to note, a seeming confirmation of the report of Dr. Guppy's death.

"Erzeroum, Nov. 8th, 1877.

"Drs. Pinkerton and Denniston arrived here last Sunday afternoon (4th) just as the last great fight was going on (Devel Bouyounau). I have arranged with the authorities to open another English hospital, and the building is to be made over to me to-morrow. I am most anxious to have this hospital ready without delay, as I expect the Russians will not leave us quiet beyond Saturday next, and once they begin our wounded will be reckoned by hundreds in a very few hours. .....

"Nov. 9th.—We have had a fierce fight; the Russians assaulted the eastern forts, near our house, at 4.30 A.M. Our men have fought well, and driven back the enemy.

"Dr. Guppy died of typhoid rather suddenly on Nov. 17th; there has only been a telegram as yet."

MIXED NARCOSIS.

(From an occasional Correspondent.)

THREE OPERATIONS ON THE JAWS BY THIERSCH FOR MALIGNANT DISEASE, WHILE THE PATIENTS WERE UNDER THE INFLUENCE OF MIXED NARCOSIS.

ABOUT three weeks ago Thiersch operated three times for malignant disease affecting the bones of the face. In each case he removed the bone chiefly implicated, and as much of the surrounding and deeper-lying structures as was necessary or possible.

In the first case, in which the inferior maxilla was affected, he excised half the bone and also a considerable amount of the skin around the growth, which had perforated the cheek, and had a very characteristic malignant ulcerative appearance. In consequence of the free removal of skin it was impossible to completely close the wound. The patient got intense glossitis, which prevented deglutition. The glossitis, however, greatly diminished, but the patient continued to sink, and became most extremely anæmic. There was slight recurrent hæmorrhage, and on November 26th the common carotid was tied, and shortly afterwards transfusion of blood to the extent of about 12 oz. was performed, but the patient died on the table during the operation.

In the second case, the superior maxilla was removed with a very large growth, and the structures beneath freely cleaned. The whole of the skin incisions united by first intention, and the cavity filled up well and healthily. He was shown in Klinik on Nov. 23rd, nearly well. The cavity was almost completely filled up, and at a short distance the line of incisions could not be distinguished. The general health good.

In the third and last case the superior maxilla was removed. The patient, however, died a few hours after the operation, and at the autopsy the disease was found to have perforated the upper wall of the left orbit, and attacked the dura mater.

The cases in themselves were instructive, but a more interesting feature lay in the steps preceding the operations. Anæsthesia was obtained by the newest German plan—that of the "mixed narcosis" (Gemischte narkose),—the discovery of which is ascribed to Prof. Nussbaum, of Munich. It consists in the subcutaneous injection of morphia when the patient is brought in for operation, and then the administration of chloroform. This, by-the-by, is administered here somewhat differently from the English method. Air is pumped, by means of a hand-bag, through a bottle of chloroform (hooked on to the breast of the administrator's coat), into an inhaler which fits tightly over the nose and mouth of the patient. The dose of morphia is varied according to the age and strength of the patient. Half a grain of morphia is the maximum dose; the minimum hitherto used has been a quarter of a grain.

Chloroform is given directly after the injection, as above described. At the end of five minutes' inhalation the operation can usually begin, but the administration is kept up at intervals during the course of the operation.

The effects were very marked in the three cases just related, and in each they were perfect. The patient, in each operation, allowed the blood to collect at the back of his mouth till ordered to spit it out, and then did that at once and completely. Otherwise he kept perfectly still, and watched the movements of the surgeon and the bystanders with a half-stupid but evidently interested look; yet he evidently felt no pain from the action of the saw, the knife, or the scraper.

In operations about the face and jaws, where it is of importance that the blood should not trickle down the trachea, the new mode of producing anæsthesia can be safely employed and with advantage. As to the results I am certain, but as to the safety I cannot yet speak. It has only been used here since last month—about five times, I believe; but so far there have been no bad symptoms following its use. There can, I think, be no doubt that mixed narcosis will cause insensibility to pain without abolishing all voluntary movements.

On Saturday last, at University College Hospital, through the kindness of Mr. John Marshall, and with the assistance of Dr. Ringer, we had an opportunity of trying in three cases the new mode of producing anæsthesia.

No special explanation was made to any of the patients, who only knew that they were about to be operated on, but were not aware of any novelty in the proposed mode of relieving pain.

The first case was that of a man aged thirty-five who had large and very painful external piles. One-third of a grain of morphia was given subcutaneously and the inhalation of chloroform was *at once* begun. In two minutes and a half the man was apparently insensible to pain, and did not flinch when the piles were grasped with the forceps. But when the scissors, which were rather blunt, were used he cried out lustily and struggled a little, but very little, and became tranquil immediately the clipping ceased. When asked if he had experienced pain he replied that he had felt some cutting and pulling, but he spoke extremely vaguely.

The second case was that of a little boy with necrosis of the left upper jaw and suppuration. A subcutaneous injection of one-twelfth of a grain of morphia was given in the back of the right forearm. The child cried very much from the prick. Two minutes were allowed to pass before chloroform was given. After chloroform had been kept up for five minutes a probe was passed into the antrum, and after that attempts were made to remove a piece of dead bone with a pair of ordinary dressing forceps. The child did not flinch or cry during the whole of this time, although he put out his tongue quickly and fully when asked to do so. It was found necessary to employ a gouge to enlarge the opening, and then the boy cried, but did not resist much, and became quiet immediately the gouging ceased. A quarter of an hour after the operation he confessed that the prick of the syringe was much worse than the operation.

The third case was that of an aged woman who had an old fracture and dislocation of the ankle-joint. The limb was exquisitely tender, and could not bear even gentle handling. A quarter of a grain of morphia was given subcutaneously, and after three minutes had elapsed chloroform was given for five minutes. A tenotome was used to divide some fibrous bands which prevented reduction, and then the woman cried out that some one was pricking her with a pin. When extension was attempted there was great muscular resistance, and the patient seemed to be making great efforts, and suffering very much. It was found necessary in this instance to produce complete chloroform narcosis in order to obtain requisite muscular relaxation.

Considering the cries of all the patients, and the struggles of the old woman, it seemed as if the combination of subcutaneous injection of morphia and the inhalation of chloroform had been only a modified success, although it could not be denied that the degree of apparent insensibility to pain was much greater than could be accounted for by the amount of chloroform that had been given. In none of the patients did sensation appear to be completely abolished, except in the third case, in which chloroform was pushed. So long as the patients preserved consciousness, and could answer questions, or protrude the tongue, they cried out when subjected to painful manipulations, but the immediate tranquillity that occurred was very striking. There was no remonstrance and refusal to submit to further operation that would have been made had the patients really suffered much.

Nothing approaching the quiet and freedom from pain described in Thiersch's cases, reported above, was attained, and, so far, there were grounds for disappointment; but on interrogating the patients some hours after the operations, it was discovered that the success had been really better than it seemed. The boy declared that he remembered nothing except the prick of the syringe, and the old woman, although she struggled so much, said that she remembered little or nothing of what had been done. The man had some pain for some hours after the operation, but had no further trouble. Although the little boy had his dinner just before the operation, he was not sick, nor did either of the other patients vomit; but the woman had more or less nausea for a day or two afterwards.

The hope of discovering an anæsthetic agent that shall abolish sensation without impairing consciousness may have been but imperfectly realised, but we feel that a step has been made in that direction. For operations that are not very painful, or in which complete stillness or muscular relaxation is required, "mixed narcosis" is useful, but this method is obviously unfitted for operations on or near important organs, for the ligature of bloodvessels, and for most ophthalmic operations. On the other hand, in operations about the mouth and jaws, the combination is, as we pointed out last week, admirably suited.

Finally, it may be observed that the patients appeared to be more susceptible than usual to the influence of chloroform, and could be put under its influence more rapidly;

but we cannot speak with certainty on this point, as chloroform was given on lint. Much less chloroform was used than would have been required under ordinary circumstances. The pupils became contracted somewhat suddenly about ten or fifteen minutes after injection—that is, in the instances referred to, either towards the end of the operation or after it was finished.

In future cases it may be well to allow a longer interval—say, ten minutes—to elapse between the subcutaneous injection and the inhalation of chloroform.

Correspondence.

"Audi alteram partem."

"AMPUTATION AT THE HIP BY A NEW METHOD."

To the Editor of THE LANCET.

SIR,—I have been asked whether the method of amputation at the hip described in my paper in the last number of THE LANCET be not the same as that of Larrey. I am perfectly accurate, I believe, in saying that it is not.

I may quote from Brittan's translation of Malgaigne's Operative Surgery, ed. 1846, the description of Larrey's operation, in Larrey's own words:—"The surgeon, standing on the inside of the thigh, commences by tying the crural artery. For this purpose he makes with a scalpel an incision parallel to the vessel, commencing immediately below the crural arch, and descending two inches and a half below it. He isolates the crural artery and vein from the nerves, passes a strong ligature under them, and ties it over a roll of linen, so as to perfectly compress them; the end of the ligature is fastened to the belly with a bit of adhesive plaster, and left to an assistant. This being performed, he divides the skin all round the limb by a circular incision, commencing behind immediately below the great trochanter, and continuing in a straight line towards the fold of the nates, then inwards, then forwards to the place where it began. Then he cuts the internal flap by prolonging the longitudinal incision that served in tying the artery down to the circular, causing the knife to act from within outwards, or from without inwards, according as the parts are more or less untouched; uncovers the inside of the joint, cuts the capsule and round ligament, then luxates the head of the femur inwards, and traversing the articulation, bringing the knife to the outside of the bone, finishes the division of the soft parts, falling on the preliminary incision of the skin."

To anyone who chooses to look at the description of the operation in my paper, and to compare it with that quoted above from Larrey, it must be clear, I think, that the two are not in any way alike. The idea of operating in the method which I followed was borrowed from Spence's amputation at the shoulder, and certainly not from the method of Larrey.

In conclusion, I wish to add that in the amputation I do not think it desirable to saw through the trochanters before disarticulating. The femur is best disarticulated entire, and the double saw-cut in the case recorded was made merely because the hip-joint in that particular case happened to be anchylosed.

I am, Sir, your obedient servant,

Glasgow, Nov. 28th, 1877. DAVID FOULIS.

CURARA IN HYDROPHOBIA.

To the Editor of THE LANCET.

SIR,—While attention is directed anew to the pathology and treatment of hydrophobia, owing to its recent prevalence in some parts of England and of Scotland, the records of any recent and well-authenticated cases of this dreadful malady, in which treatment has been rewarded with success, are of paramount importance. We can thus determine whether any new line of therapeutic action, which can be based on rational physiological principles, is indicated as deserving of extended trial; and whether the special manner in which it should be put into practice can be approximately arrived at.

For the treatment of hydrophobia it would appear that in curara we have a valuable therapeutic agent; and I desire to strengthen the hands of the editors of THE LANCET and *Medical Times and Gazette* in their recent able editorial comments on this subject. In those articles it has, I think, been too hastily assumed that no proof exists that any case of genuine hydrophobia has ever been cured, unless it be that recorded by Dr. Offenburg, of Winkrath, in 1874, to which allusion is made (THE LANCET, Oct. 27th). It is my object to show that this statement, which, so far, has escaped criticism, does not represent the sum of our therapeutic knowledge regarding the successful treatment of this disease. The other two recent cases which I shall bring under notice are besides of much value, as they point in exactly the same direction as that of Dr. Offenburg, and, together with it, warrant the hope that in similar cases curara, when pushed rapidly to the manifestation of its peculiar physiological effects, may be found equally efficacious.

In the *American Journal of Medical Science*, July, 1876, p. 81, Dr. B. A. Watson, of Jersey City, minutely discusses, and gives the fullest particulars of, a case which he and Prof. Austin Flint regarded as an instance of true canine rabies. The symptoms of rabies developed themselves forty-seven days after the individual—a strong healthy man, forty-five years of age—had been bitten on the finger by his own rabid dog. His servant girl, who had been bitten at the same time, and by the same animal, died five days before the commencement of her master's illness of unmistakable hydrophobia. In this man's case there was a gradual increase in the severity of the symptoms till after the subcutaneous administration of curara in full and rapidly augmenting doses ($\frac{1}{10}$ gr., $\frac{1}{5}$ gr., $\frac{1}{4}$ gr.) every third hour. The unfavourable symptoms forthwith subsided and disappeared completely after the third injection.

The second case was treated by Dr. Polli, is to be found in the *All. Med Berlin. Centr. Zeitung*, and is abstracted in *Le Paris Médicale*, May 17th, 1877. A child, twelve years old, had been bitten by a rabid dog eighty days before the manifestation of the hydrophobic symptoms. Subcutaneous injections of morphia and chloroform inhalation having been tried without success, curara was injected subcutaneously on seven different occasions within the short space of five and a half hours. During this period twenty centigrammes (i.e., three grains) of curara were injected. The hydrophobic symptoms quickly subsided, being replaced by paralytic symptoms of a very pronounced character. Two days subsequently some renewed hydrophobic symptoms were completely banished by a fresh injection of three centigrammes (nearly half a grain) of curara. The child slowly recovered.

In Dr. Offenburg's case (THE LANCET, Oct. 27th), where characteristic symptoms of rabies manifested themselves in a girl, eighty days after she had been bitten by a rabid dog, the subcutaneous injection of one-third of a grain of curara every fifteen minutes resulted in the cessation of the hydrophobic symptoms, and the supervention of general paralysis, rendering artificial respiration necessary.

If it be conceded that these well-authenticated cases were instances of genuine hydrophobia, as their narrators with good reason maintain from a careful consideration of their history and all the symptoms, they are uniformly and highly suggestive as regards a method of treatment of this malady which hitherto has not received the attention it thus demands. More than ten years ago, Trousseau, when suggesting the possible advantage of the subcutaneous administration of curara in hydrophobia, was not deterred by the want of success which had attended its use in tetanus. "Perhaps the want of success," he remarks, "may be largely due to the mode of administration of the drug" (*Clinique Médicale*, vol. ii., p. 380). This, it appears to me, is the point on which these three cases are so instructive. They demonstrate that, to be of service, curara must be employed in full, and, probably best of all, in rapidly augmenting subcutaneous doses, varying from one-tenth to half a grain, at short intervals, until the paralytic symptoms, which experimental physiology has taught us to recognise as the manifestation of the full influence of the drug, begin to develop themselves. At this stage artificial

respiration may even become necessary, as in Dr. Offenburg's case. The variation in strength of specimens of curara renders it important that the fluid to be injected should be procured from those who are likely to have exercised special care in the selection of the drug. A solution so concentrated—half a grain in five minims—as that prepared by the Messrs. Gale of Bouverie-street (THE LANCET, Nov. 10th), if reliable, seems to supply such a desideratum.

Faithfully yours,

EDW. WOLFENDEN COLLINS, M.D.,
Surgeon to Jervis-street Hospital.

Lower Baggot-street, Dublin, Nov. 13th, 1877.

THE MEDICAL ASPECTS OF TOTAL ABSTINENCE.

To the Editor of THE LANCET.

SIR,—In common, I presume, with most members of our profession, I have awaited from week to week with interest and curiosity the letters that have lately appeared in your columns on the subject of abstinence from alcohol. I have hitherto refrained from seeking to take part in a discussion so fully sustained on either side; but I should now like, with your permission, to say a few words in reply to the communication of Dr. Braxton Hicks, in THE LANCET of Nov. 17th.

It appears to me that no better illustration could be found of the prevalent fallacy that underlies much of what has been said and written on this subject; for, to enable one properly to appreciate the writer's argument, he ought to have appended to his letter a portrait of himself. Otherwise, it would be impossible for anyone unacquainted with his physique to estimate the force of his reasoning. Dr. Braxton Hicks, as we know, is a gentleman of full habit of body, hale, and vigorous—just one of the many who, if they choose to abstain from wine, may do so with impunity, presumably even with advantage to bodily health. But can the same be said of people—and there are not a few such in the world—of an exactly opposite temperament, pale, thin, somewhat delicate, nervous, or phlegmatic? This, Sir, I take to be the gist of the whole question. I belong myself, to some extent, to the latter category; and I know, by various tests and long experience, that the daily use of a little wine is indispensable to my health. But I have never been in the habit of taking what is crudely designated alcohol, except as it exists in the light wines of France and Germany. If the pending discussion were upon the question of taking or not taking luncheon instead of on the question of taking or not taking alcohol, I have no doubt many would come forward and depose to the great comfort and convenience with which, for six months or a year, they had dispensed with that meal. Lord Macaulay never partook of food in the middle of the day till he was nearly fifty, and then he lamented the failure of strength that obliged him to have recourse to this ordinary necessity of self-preservation.

But really, Sir, the late lucubrations of English writers on the subject of what they call "alcohol" appear intolerably insular to anyone acquainted with the usages of continental countries, more particularly France, Spain, and Italy. In the latter, "il vino nostrale" is universally regarded as the natural adjunct and adjuvant of bread. Manzoni, in his memorable description of the famine that preceded the plague in Milan, thus relates the distribution of food to the famishing populace: "A cui il cibo potesse ancora essere rimedio dispensavano minestre, nova, pane, vino." Sit down to a public *déjeuner* or dinner in any part of France, and you see men, women, and children partake of wine with as little consciousness of doing anything abnormal as have we when we drink tea or coffee. In Spain the use of wine has been universal ever since the days when Don Quixote and his squire emptied a skinful of the beverage in the goatherd's hut; and I have seen in that country more than one assemblage of 16,000 people at a bull-fight, in which there was neither a drunken person nor a policeman.

In truth, what we require in England is not so much total abstinence as a national reform of the public taste. M. Taine, in his "Notes sur l'Angleterre," has well expressed this. "Pareillement," he says, "leurs vins ordinaires, porto, sherry, très-chauds, très-liqoureux, sont en outre coupés (mêlés) d'eau-de-vie; ce mélange leur ôte leur finesse. Mais s'ils étaient purs, les Anglais les trouveraient fades; nos vins de Bordeaux et même de Bourgoyne sont trop légers pour eux. Dans la classe moyenne on préfère l'ale, le stout, le porter, surtout le *brandy-and-water*, sorte de grog où l'eau-de-vie entre pour moitié. Pour leur plaire, il faut que la boisson soit âpre ou brûlante; le palais doit être gratté ou raclé."

It may now almost be said of England, as an unsophisticated French traveller in the sister isle wrote of the native whisky, "Le vin du pays est diablement fort."

I remain, Sir, yours faithfully,

Sussex-gardens, Hyde-park, Nov. 1877. T. FITZPATRICK.

OUTBREAK OF TYPHOID FEVER IN THE TOWN OF WESTBURY, WILTS.

To the Editor of THE LANCET.

SIR,—We have a slight epidemic of typhoid fever in this town, and my object in calling your attention to the matter is to elicit your opinion on the hygienic bearing of the case. The fever broke out at a dairy-farm in Westbury more than six weeks ago. The first one attacked was the wife of the farmer, the second was the maidservant, and the third the son of the farmer. The question arose, What was the cause of this outbreak? The copy of the report of the sanitary officer, Mr. Foley, will speak for itself—viz., "Nuisance at the dwelling-house and premises occupied by George Jackson at Gashouse farm, Westbury, Wilts, arising from foul and offensive defective drainage from the *dairy*, washhouse, and premises; also a foul and open cesspool to the privy at the back of the said dwelling-house and adjacent to the well, the water of which is fouled and rendered unfit for drinking and domestic purposes." He also goes on to state, "Water in well at back of dwelling-house foul; privy vault about ten feet from well." The dwelling-house is small, rooms low and small, dairy small and close to the scullery, which contains the pump from well. The water from the well is impure and unfit for domestic purposes. Jackson says that the water from well is not used for drinking or cooking purposes, but admits that it is used frequently to wash out the milk cans, unless when the well goes dry, when they use water from the river, which contains much of the drainage of the town. The cows belonging to Jackson's farm drink the water from the river.

I have already stated that three cases of fever arose from Jackson's dwelling. The maidservant was sent home, and on Mrs. Jackson's recovery she nursed her son, and at the same time assisted in the dairy.

The fourth case was the daughter of a draper in Westbury, living some distance from Jackson's. I can find nothing on his premises to account for the case. The privy, drains, and water-supply are very satisfactory. The supply of milk for the family comes from Jackson's dairy.

The fifth case is the daughter of a clothworker in Westbury. Privy, pump-well, and drains in a satisfactory state. The supply of milk comes partly from Jackson's dairy, though indirectly through a milkman.

The sixth case is the son of a draper, of Westbury. Privy, water-supply, and drains in a satisfactory state. The supply of milk comes partly from the same milkman who supplies case No. 5.

The seventh case is the son of another draper. Privy, water-supply, and drains in a satisfactory state. The supply of milk comes wholly and direct from Jackson's dairy.

There are at present no other cases in the town. I brought the matter before the Board of Guardians, and Jackson had an order to discontinue the sale of milk and butter till the fever in his house had abated, and the sources of the same removed. Did I exceed my duty in recommending the Board to take these steps?

Faithfully yours,

FRANCIS WILLIAM SMITH, M.B.,
Westbury, Wilts, Dec. 1st, 1877. Medical Officer of Health.

*** From the medical point of view there can be no doubt that the action taken by Mr. Smith was right. Indeed, no

other course could have been followed if the extension of the mischief from the use of the milk was to be promptly put a stop to. From the legal point of view we are unable to state what were the limits of Mr. Smith's duty. No case has been before us which would help us to a decision in this matter. The question in its legal aspect should be addressed to the Clerk of the Sanitary Authority, or, if he be not a lawyer, to the Local Government Board. It is highly desirable that all the actions of a sanitary authority and its officers should be kept within the letter of the law, but in face of a danger so great as that described by Mr. Smith, the medical instinct can scarcely be expected to rest quiet until the legal niceties of the case are settled, and happily the popular instinct usually accepts without question the medical view.—ED. L.

"HOW SMALL-POX IS SPREAD."

To the Editor of THE LANCET.

SIR,—In reference to the letter in last week's LANCET, I regret that Mr. T. W. Lacey should not have communicated with the hospital authorities before rushing hastily into print and idly explaining how small-pox is spread. I beg to say, as one of the committee of the hospital at Stockwell, that in no case is it possible that a patient can be seen unless in the most urgent danger, and then only the nearest relative is written to and allowed to see the case. A book is kept at the lodge, in which the names of semi-moribund cases are registered, and this is corrected day by day; and again a paper is put into the hands of each visitor, warning them of the risk they run, and advising revaccination previous to entering the hospital,[1] &c. Does Mr. Lacey imagine that infectious hospitals could exist if friends were not allowed to enter? Or would he prefer that all visitors should be carbolised, and so reveal to their neighbours the fact that they had just returned from an infectious hospital? Believe me, Sir, that I state a fact when I say that in no hospital existing is more care taken than at Stockwell to prevent indiscriminate visiting, and for the utter destruction of excreta before entering the sewers, and disinfection of clothing and body-linen, and that the letters sent from the hospital are all exposed to a potent system of disinfection.

I am, Sir, your obedient servant,

WILLIAM SOPER,

Member of the Metropolitan Asylum Board.

Clapham-road, S.W., Dec. 3rd, 1877.

P.S.—Will you allow me to state one or two further particulars? The friend of the patient stayed in the ward only ten minutes, and when leaving, asked the porter if she might bring in a few grapes. This request was *exceptionally granted*, and she within a few minutes came back with the grapes, took them to the ward, and at once retired. I may further add that a special over-all kind of dress was put upon the visitor—this being the custom—and before leaving she was made to wash her hands in carbolic solution. These dresses are daily disinfected. A meeting of the committee of the Asylum Board has been held to-day, and the result will, I feel sure, do much to allay the alarm occasioned by visiting infectious cases, as the precautions to be adopted will be made much more stringent.—W. S.

Dec. 4th, 1877.

[1] STOCKWELL HOSPITALS.—The Committee hereby give notice to the friends of patients that they run great risk in visiting the hospitals, unless they have been previously properly vaccinated. It has come to the knowledge of the Committee that persons not thus protected, who have been allowed to see relatives lying dangerously ill in the hospitals, have themselves caught the disease and died; no person, therefore, should attempt to enter the wards of the hospital without having been revaccinated; and the Committee recommend all persons residing in a house where a case of small-pox occurs, at once to call on the public vaccinator, whose address may be obtained from any of the parish officers. In the public interest, it is necessary to limit the visiting of patients to the nearest relatives or intimate friends of persons lying dangerously ill, and even then the Committee would urge such persons not to enter the wards unless they have been properly revaccinated; and these visits, which can only be made by permission of the Medical Superintendent, must be strictly limited in their duration.—By order of the Committee, W. F. JEBB, Clerk.—February 3rd, 1872.

Medical News.

UNIVERSITY OF LONDON.—The following are lists of the candidates who have passed the recent Examinations:—

M.D. Examination.

Archer, Herbert Ray, St. George's Hospital.
Hetley, Henry, Guy's Hospital.
Hoar, Charles Edward, King's College.
Hunt, J. W., B.S. (Gold Medal), University College.
Jameson, Leander Starr, B.S., University College.
Kidd, Walter Aubrey, B.S., Guy's Hospital.
* Ord, William Miller, St. Thomas's Hospital.
Rigby, James Arthur, Guy's Hospital.

LOGIC AND MORAL PHILOSOPHY ONLY.

Ashby, Henry, Guy's Hospital.
Bogg, Thomas Wemyss, University College and Manchester Royal Infirmary.
Burton, Samuel Herbert, B.S., University College.
Firth, Charles, St. Bartholomew's Hospital.
Morley, Thomas Simmons, Guy's Hospital.

* Obtained the number of marks qualifying for the Medal.

M.S. Examination.

Pepper, Augustus Joseph, University College.

B.S. Examination.

FIRST DIVISION.

Symonds, Charters James, Guy's Hospital.
Verco, Joseph Cooke, M.D., St. Bartholomew's Hospital.

SECOND DIVISION.

Bury, Judson Sykes, University College.

Second M.B. Examination for Honours.

MEDICINE.

FIRST CLASS.

Smith, Herbert Urmson (Scholarship and Gold Medal), St. Thomas's Hospital.
† Horrocks, Peter (Gold Medal), Guy's Hospital.
Symonds, Charters James, Guy's Hospital.

SECOND CLASS.

Tirard, Nestor Isidore Charles, King's College.

OBSTETRIC MEDICINE.

FIRST CLASS.

Tirard, Nestor I. C. (Scholarship and Gold Medal), King's College.
Symonds, Charters James (Gold Medal), Guy's Hospital.
Smith, Herbert Urmson, St. Thomas's Hospital.
Gristock, William, University College.

SECOND CLASS.

Barrow, Albert Boyce, King's College.
Sedgefield, Arthur Robert Wyatt, King's College.
Stevenson, Leader Henry, Guy's Hospital.
Horrocks, Peter, Guy's Hospital.
Giles, George Michael James, St. Mary's Hospital.
Goodchild, Francis, St. George's Hospital.

FORENSIC MEDICINE.

FIRST CLASS.

Tirard, Nestor I. C. (Scholarship and Gold Medal), King's College.
Symonds, Charters James (Gold Medal), Guy's Hospital.

SECOND CLASS.

Sedgefield, Arthur Robert Wyatt, King's College.

THIRD CLASS.

Equal { Smith, Herbert Urmson, St. Thomas's Hospital.
Equal { Stevenson, Leader Henry, Guy's Hospital.
Joll, Boyd Burnett, University College.

† Obtained the number of marks qualifying for the Scholarship.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine and received certificates to practise on Nov. 29th:—

Blackburn, Herbert Belasyse, Selham, Sussex.
Couzens, Charles, London Hospital.
Gamble, Ernest Langwith Gompertz, Grantham.
Landon, Arthur Jermyn, Margaret-street.

The following gentlemen also passed the Primary Professional Examination:—

Frederick William Ellison, St. Bartholomew's Hospital; Alten Kingsley Hoets and Edwin Charles Warren, London Hospital; William Alfred Phillipps, Guy's Hospital.

DR. J. H. HAMMOND, of Preston, has been placed on the Commission of the Peace for Lancashire.

THE Council of University College, London, have awarded the Sharpey Physiological Scholarship to Mr. Patrick Geddes.

DR. EAMES, medical superintendent of the Cork District Lunatic Asylum, gave last week the first of a series of lectures on "Insanity, its causes and treatment," in the Queen's College, Cork.

DR. GRAVES' statue will be inaugurated on Wednesday, the 19th inst., at the College of Physicians, Ireland.

IT is calculated that to make the necessary arrangements for the proper reception of the British Association for the Advancement of Science in Dublin next August, a sum of between £3000 and £4000 will be required. The Executive Committee have appealed for funds, and up to the present have obtained nearly £2000 towards that object.

ROYAL MEDICAL SOCIETY, EDINBURGH.—At a meeting of the Society, held on the 23rd ult., the following gentlemen were elected annual Presidents:—Robert Roxburgh, M.B., L.R.C.S.; Johnson Symington, M.B., C.M., M.R.C.S.; David Hart, M.B. C.M.,; George A. Gibson, M.B., D.Sc., F.G.S.

DUBLIN HOSPITAL SUNDAY.—The amount already received has reached about £3400, but as contributions from some forty churches have not been sent in, the total amount cannot yet be ascertained. Last year the collections reached £3600, and, as we stated on a previous occasion, we believe that the returns this year will show an increase over that of 1876.

DONATIONS, &C., TO MEDICAL CHARITIES.—The St. George's Hospital has received £3000 under the will of Mr. Francis Cole Humbert. The Worksop Dispensary has received £100 under the will of the Honble. Mrs. Miles, of Firbeck Hall. Mr. William Coles Dutton, of Upper Woburn-place, bequeathed £100 to the British Home for Incurables, Clapham-rise.

Medical Appointments.

BERRIDGE, W. A., M.R.C.S.E., has been appointed Mr. Hutchinson's House-Surgeon at the London Hospital.

BRADFORD, C., M.R.C.S.E., L.S.A.L., House-Physician to the Queen's Hospital, Birmingham, has been appointed Surgeon to the Cornwall Works, Birmingham.

CALLENDER, J. H., L.S.A.L., has been appointed House-Surgeon to the North Shields and Tynemouth Dispensary, vice Tindle, resigned.

CLARK, W., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Surgeon and Public Vaccinator to the Parish of Fenwick, Ayrshire, vice Morrison, resigned.

CLARKE, Mr. E., of King's College Hospital, has been appointed Resident Surgeon to the Portland-town Free Dispensary, vice Pickup, appointed to the General Infirmary, Bedford.

CLUBBE, C. P. B., L.R.C.P.L., M.R.C.S.E., has been appointed House-Surgeon to the Kidderminster Infirmary, vice Birch, resigned.

CURROR, A. L., M.B., C.M., has been appointed Medical Officer and Public Vaccinator for the Parish of Abbotshall, Fifeshire, vice Morison, deceased.

DAVIDSON, J. M., M.B., has been appointed Medical Officer and Public Vaccinator for the Parish of Kirkmichael, Dumfriesshire, vice Barbour, resigned.

DAVIS, H., L.R.C.P.L., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer and Public Vaccinator for the No. 5 or Stoke-Climsland District of the Launceston Union. (Resigned, and since deceased.)

DUNCAN, Dr. B. A., has been appointed Physician to the National Hospital for Diseases of the Heart and Paralysis, Soho-square.

EVANS, A., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Lampeter Union Workhouse.

FLINN, J. J., L.R.C.P.Ed., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer of Health for the Wem Rural Sanitary District, vice Gill, resigned, at £80 for one year.

FURNIVALL, H. W., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer and Public Vaccinator for the Woodbury District of the St. Thomas Union, Exeter.

GROSS, C., L.R.C.P.L., M.R.C.S.E., has been appointed Medical Officer to the St. Saviour Union Infirmary, at Westmoreland-road, Walworth. £400 per annum, residence, &c.

HUGHES, H. R. G., L.R.C.P.Ed., M.R.C.S.E., has been appointed a Surgeon to the Carnarvonshire and Anglesey Infirmary, Bangor, vice Richards, appointed Physician.

JEAFFRESON, G. E., M.R.C.S., has been appointed Consulting Surgeon to Albert Memorial College, Framlingham, vice Truman, deceased.

JONES, C. J., L.K.Q.C.P.I., M.R.C.S.E., has been appointed Medical Officer of Health for the Lower Division of the Ystradyfodwg Urban Sanitary District, Glamorganshire.

LAWLOR, J. S., M.D., C.M., has been appointed Medical Officer, Public Vaccinator, &c., for the Tallaght Dispensary District of the South Dublin Union, vice Seward, deceased.

LOUGHNAN, M., L.K.Q.C.P.I. & L.M., L.R.C.S.I., has been appointed Medical Attendant to the Royal Irish Constabulary, Rathmullen, and Admiralty Surgeon and Agent, Lough Swilly, vice West, resigned.

MCCONAGHY, R., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer, Public Vaccinator, &c., for the Castlefin Dispensary District of the Strabane Union, co. Tyrone, vice Keys, resigned.

MCHARDY, M. M., F.R.C.S., has been appointed Assistant-Surgeon to the Royal South London Ophthalmic Hospital; also Ophthalmic Registrar to St. George's Hospital.

MAGILL, W. S., L.R.C.P.Ed., L.R.C.S.Ed., has been reappointed Medical Officer and Public Vaccinator for the Embleton District of the Alnwick Union.

MALINS, E., M.D., has been appointed Obstetric Physician to the General Hospital, Birmingham.

MAPLES, R., L.R.C.P.Ed. & L.M., M.R.C.S.E., L.S.A.L., has been appointed Assistant Medical Officer and Dispenser to the St. Saviour Union Infirmary, at Westmoreland-road, Walworth. £130 per annum, furnished apartments, rations, &c.

MOORHEAD, T. R. H., M.D., has been appointed Medical Officer to the Workhouse Infirmary and Fever Hospital, Cootehill Union, co. Cavan, vice Williams, deceased, at £80 per annum, and 21s. per Consultation as Medical Officer of Health.

OWEN, R. E., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the *Clio* training-ship off Beaumaris.

PATTERSON, J., M.D., has been appointed Medical Officer, Public Vaccinator, &c., for the Gweedore Division of the Falcaragh Dispensary District of the Dunfanaghy Union, vice Loughnan, resigned.

RHYS, W., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer of Health for the Upper Division of the Ystradyfodwg Urban Sanitary District.

SNELL, S., L.R.C.P.L., M.R.C.S.E., has been appointed Lecturer on Anatomy at the Sheffield School of Medicine, vice Skinner, resigned.

TURNER, W., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Poole Union Workhouse, vice Ellis, resigned.

WHITE, J. C., L.R.C.P.Ed., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Redditch and District Medical Aid Association, vice Peirce, whose appointment will terminate on the 31st inst.

WILLETT, C. V., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Brandon District of the Thetford Union, vice Thompson, resigned.

WILLIS, W., M.D., M.R.C.S.E., has been appointed a Surgeon to the Monmouth General Hospital and Dispensary, vice Norman, resigned.

Births, Marriages, and Deaths.

BIRTHS.

BURMAN.—On the 2nd inst., at the Wilts County Lunatic Asylum, Devizes, the wife of J. Wilkie Burman, M.D., Medical Superintendent, of a daughter.

CARR.—On the 2nd inst., at Apsley-place, Glasgow, the wife of Dr. William Carr, of a daughter.

CRAWFORD.—On the 1st inst., at Uddingston, Lanarkshire, the wife of William Crawford, M.D., of a son.

CREAGH.—On the 7th ult., at Peshawur, Punjab, the wife of William Creagh, L.R.C.S.I., Surgeon-Major, Army, of a son.

MOORE.—On the 24th ult., at Taunton, the wife of John Murray Moore, M.D., of a son.

PEARSON.—On the 1st inst., at Upper Phillimore-place, Kensington, the wife of David R. Pearson, M.D., of a son.

PITMAN.—On the 29th ult., at Acacia House, Highgate-hill, the wife of Robert Pitman, L.R.C.P. &c., of a son.

SHAW.—On the 30th ult., at Banstead, Surrey, the wife of Thomas Claye Shaw, M.D., of a daughter.

TODD.—On the 5th inst., at North Petherton, Somerset, the wife of W. J. Todd, L.R.C.P.L., of a daughter.

MARRIAGES.

HORNE—STREET.—On the 21st ult., at St. John the Baptist Church, Westbourne, Thomas Horne, L.R.C.P.Ed., to Mary Pauline, daughter of the late James C. Street, Esq.

WADDY—HARVEY.—On the 29th ult., at St. Kevin's, Wexford, Dr. John Percy Waddy, to Barbara, daughter of Joseph Harvey, Esq.

DEATHS.

BEAUCHAMP.—On the 22nd ult., at Bath, William Beauchamp, M.R.C.S.E., late of the Madras Service.

GREENE.—On the 23rd ult., at Urlingford, co. Kilkenny, William Greene, M.R.C.S.E., aged 85.

RUNCORN.—On the 28th ult., at St. Mary's Hospital, Manchester, Henry Runcorn, M.R.C.S.E., aged 65.

STEWART.—On the 27th ult., at Ealing, Dr. Charles John Stewart, M.R.C.S., late Surgeon of the 29th Middlesex Rifles, son of C. J. Stewart, Esq., of Kentish-town, aged 45. R. I. P.

STRACHAN.—On the 26th ult., at Dollar, John Mitchell Strachan, M.D., aged 66.

TAYLOR.—On the 30th ult., at Botesdale, Suffolk, Robert Taylor, M.R.C.S.E., aged 47.

[N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*]

BOOKS ETC. RECEIVED.

Dr. D. Duckworth on the Medical Injunction of Stimulants in Disease and in Health.
Dr. B. A. Watson: Pyæmia and Septicæmia.
Dr. Gee: Auscultation and Percussion.
Dr. Bose: Rational Therapeutics.
" New System of Medicine.
Dr. J. C. Peters: Transactions of the New York Pathological Society. Vol. II.
Cassell's History of India. Part XXIV.
The Monthly Homœopathic Review.
H. O. Thomas on Diet and Opium in Intestinal Obstructions.
The Veterinarian. December.
The Veterinary Journal. December.
G. Fleming: Veterinary Obstetrics.
S. Butler: Life and Habit.
H. Gray: Anatomy, Descriptive and Surgical.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

DIPLOMA OF FELLOW.

SECOND EXAMINATION: PATHOLOGY, THERAPEUTICS, AND SURGERY.

November 22nd, 1877.

All four questions *must* be answered.

1. Describe the methods adopted for excision of the whole or part of the superior maxillary bone, and state what vessels and nerves are likely to be implicated in these operations.
2. Give the pathology of acute specific bubo from its commencement to its termination in spontaneous cure. In what way may treatment modify the progress of such a case?
3. On what morbid changes may stricture of the rectum depend? Describe the diagnostic characters of each variety, and its appropriate treatment.
4. What are the accidents and risks incidental to lithotrity? How are they to be avoided? and, if they occur, how are they to be treated?

Notes, Short Comments, and Answers to Correspondents.

THE DURATION OF HOSPITAL APPOINTMENTS.

THE occurrence of a resignation by one of the surgeons of the South Devon and East Cornwall Hospital has given occasion for the discussion of a very important question—that of the desirable duration of hospital appointments. We congratulate the public of Plymouth on having both sides of this question well stated to them in newspaper letters, and a very able judgment in the columns of the *Western Daily Mercury*. Our contemporary goes in decidedly for the limited duration of appointments without the right of re-election, arguing that the tenure of hospital appointments is one of the most valuable means by which the efficiency of practitioners can be promoted, and consequently that this advantage should be shared as largely as possible by the medical men of a hospital town. We concur fully in this view, which is also forcibly and candidly expressed in a letter by Dr. Meeres and Mr. Jago to the *Mercury*. While we think that, as a rule, appointments should cease at the end, say, of ten or fifteen years, and that the rule should not be broken without good reason, we think that the rule should not be absolute. Every now and again there rises up in a town a man of conspicuous genius and merit, to whom a longer tenure of office should be accorded in the interest both of the public and the profession. But, with this qualification, we are in favour of a far more extensive distribution of the privileges of hospital appointments than at present obtains; for this, among other reasons, that we are persuaded that the qualities which make a good hospital physician and surgeon are far more extensively diffused than is generally believed, and are by no means confined to the two or three men in a town who happen to be the sons of retiring officers, or the personal friends of members of the Hospital Committee.

Mrs. Norris.—We regret that it is impossible to help in the matter.

CURIOUS CASE.

To the Editor of THE LANCET.

SIR,—I would feel greatly obliged if you or any of your readers could throw any light upon the following case, or suggest any treatment; so far as my knowledge extends it is unique. It is that of an unmarried lady, over forty, who has never been very strong, and who has long been nervous and dyspeptic, standing cold and unusual fatigue badly. Still she enjoys life tolerably well, all the functions of the body being performed in a more or less satisfactory manner, and she gets through her household duties, marketing, &c., with great regularity. I cannot say that she is the subject of any particular disease. The peculiar feature of her case is that she cannot sleep long without becoming so cold that she awakes. After this, even lying awake raises the temperature, and exercise soon restores the natural heat; taking any kind of food warms her; no amount of clothing has the desired effect; alcohol tends to maintain the necessary heat, but is not sufficient. Fatty matters have been taken in considerable quantity for some time, and as much sugar as the stomach would bear. If the temperature of the body is kept up artificially, she can sleep for six or eight hours at a stretch, otherwise not for a single hour. This has continued for years, and is, to say the least of it, exceedingly troublesome.

I am, Sir, your obedient servant,

Dec. 4th, 1877. PERPLEXED.

Tulpa.—Our correspondent should address his question to the Secretary of the Local Government Board. The matter should be decided at headquarters. It would be most unfair if the fee for an operation in strangulated hernia could be lawfully refused because reduction was effected by the taxis under chloroform. That method of operating is invariably tried immediately before using the knife, and there ought to be no premium offered for the omission of a final attempt to avoid grave operative interference.

F.R.C.S.—The first condition of partnership is co-operation under the terms of the mutual compact. The relations described are not satisfactory. Both the partners should account to the firm for work done and material employed.

M.R.C.S.—Napper's "Cottage Hospitals" contains, we believe, the fullest information on the subject.

"NOTED BONE-SETTERS."

THERE is a fashion just now in favour of "noted bone-setters," and every district is provided with such an official. The fashion is founded on the notion that ignorance is the best basis for good surgery in difficult cases of injury to bones near joints. Probably the best thing to do with this fashion is to let it have its way. The results of this course will be very educating. A case in point is reported in the *Nottingham Daily Guardian* of November 30th. In that part of the world the noted bone-setters are the "Maltbys," innkeepers. Mrs. Maltby was preferred in this case, as the patient was an old woman who had sustained a fracture of the thigh. It was seen by a surgeon five days after the accident. He suspected fracture, but did not pronounce positively. The slow progress of the case led the patient and her friends to send for Mrs. Maltby, who came. She pronounced the hip out of joint, and proceeded with her measures for reducing the dislocation. Almost immediately after their completion the patient fainted, and died. The jury found that "Elizabeth Sheldon met her death from an unskilful attempt to perform an operation by Myra Maltby for the purpose of setting the hip-bone." Thereafter she was informed by the coroner that she had had a very narrow escape from a charge of manslaughter. But here the case terminated. We do not see that she had "a narrow escape," and under such mild proceedings we shall have a continuation of the education of the public in regard to some slight disadvantages of ignorance in the treatment of fractures.

A Student at Guy's.—We think the fee was quite legitimate.

LAC NOIR, SWITZERLAND.

To the Editor of THE LANCET.

SIR,—Allow me to recommend to the notice of your readers an establishment and health-resort in a mountainous part of Switzerland, situated in the vicinity of Fribourg, and of easy access from that town, a three hours' drive by omnibus or carriage. It offers at once the attractions of a country residence, without being so far from town life as to cause inconvenience.

Lac Noir first came under my personal notice last June, from the middle of which month till the beginning of July I and my family enjoyed the comfort and liberal board, combined with the wild beauty of the mountain scenery, to be found at Lac Noir. An hotel and its dependencies constitute the entire village; but no solitude is felt, as there is accommodation for eighty pensionaires. The charges are among the most moderate to be met with in Switzerland, ranging from six to nine francs a day; large and commodious dining- and drawing-rooms, added to which a magnificent billiard-room, form attractions to the tourist who, pausing on his journey, rests for a while at this green and lovely little mountain spot. Telegraphic communication with Fribourg *viâ* Berne has been recently established. A post leaves every morning for Fribourg at 6 A.M., courier returning with the mail at 9 P.M. The little lake from which the place takes its name abounds in fish of great variety and delicacy, some so large as to weigh 36 lb. having been placed on the table while I was there. Sailing and rowing boats are provided free of expense to all visitors; while numerous excursions can be undertaken among the surrounding hills, lovely wild flowers, as alpenrose, gentian, &c., rewarding the excursionist. A sulphur spring at the back of the hotel has been found of great benefit to invalids, and the master of the establishment, a Fribourg gentleman, has accordingly caused baths to be constructed in the hotel for the benefit of visitors suffering from any complaint likely to be remedied by the sulphur waters. A few hours' climbing brings the tourist to the magnificent panorama of the Overland Range. As a cool retreat during the hot summer months I consider this place unequalled. To those suffering from chronic chest affections, general debility after illness, anæmia, or derangement of the digestive organs, it can be recommended; the air is rendered quite fragrant by the surrounding pine forests, similar to those at Bournemouth, and the soil is almost equally dry. To invalids who cannot climb, there are several good dry level walks by the border of the lake, and also into an adjoining wood, celebrated for a fine cascade. To those who are robust, bathing can be indulged in, as the proprietor has erected two bathing-houses at the edge of the lake, the water of which is at all times of the clearest crystal, reflecting as in a mirror. The surrounding heights are covered at one point with magnificent pines, and in other places clothed with the richest pasture. I may add, the elevation of Lac Noir, being 3000 feet above the level of the sea, ensures even at the height of summer a cool atmosphere, free from fogs, and even after heavy rain the ground rapidly dries—a desideratum not always met with in similar altitudes.

Yours truly,

C. V. CAT, M.D.,
Surgeon-Major, Coldstream Guards.

Guards' Hospital, Vincent-square, Nov. 23rd, 1877.

Mr. W. H. Williams, jun.—The subject has not, we think, been discussed specially during the present year; but remarks bearing on the question may have incidentally occurred from time to time in various articles on medical education.

Dr. Whittaker.—The paper is marked for insertion.

"THE EFFECTS OF FRIGHT."

To the Editor of THE LANCET.

SIR,—After the explosion on the Regent's Canal about three years ago, I was asked by my friend Dr. Lewis, of Albert-street, Regent's-park, to see a young married lady living in the vicinity, who had been prematurely confined on the day after the explosion, with severe hæmorrhage. She suffered for nearly three months from a low hysterical desponding state; but ultimately entirely recovered, and has since been confined at her full time.

At the same time an old gentleman, aged ninety, living in the immediate vicinity in the Avenue-road, after the fright (ceiling fell down on the bed on which he was asleep) seemed to have his memory and powers generally impaired suddenly from that time, although before that he would enjoy his rubber &c. I cannot help thinking that this shortened his life, although he lived two years after, as he came of a long-lived family, a brother having died shortly before within two months of 100.

Your obedient servant,

Ospringe-road, Tufnell-park, Nov. 26th, 1877. WALTER H. DREW.

CHINCHONA PRODUCTS AND THEIR PLACE IN THE PHARMACOPŒIA.

THE recently issued Report on Chinchona cultivated in India contains a sub-report by a Government Committee, which deals somewhat severely with the framers of the British Pharmacopœia of 1867. It is pointed out that while the edition contains a wholly impracticable formula for the manufacture of sulphate of quinine, and tests to ascertain the purity of that salt and its freedom from the alkaloids, it is altogether silent regarding the mode of preparation or uses of quinidine, chinchonidine, or chinchonine. Indian experience, the report goes on to say, has sufficiently demonstrated that there is nothing in the therapeutical or physiological action of the various chinchona alkaloids to justify the compilers of the Pharmacopœia in insisting on the separation of quinine, and its preparations, in a condition of purity. By this error the consumption of quinine during the past twenty years has been limited, while thousands of pounds of associated alkaloids, equally valuable in a remedial sense, have been wasted, and the world at large has suffered. It is urged that the whole of the Indian evidence on the use of the mixed alkaloids should be officially laid before the London College of Physicians, with a view of obtaining a recognition of the alkaloids as Pharmacopœial preparation.

Mr. C. Rice Morgan.—The subject *was* suggested by the question proposed. It is difficult to supply "a reference" to any really trustworthy account of the phenomenon.

Mr. Highet.—The paper is marked for insertion.

HYDROPHOBIA.

To the Editor of THE LANCET.

SIR,—The recent unusual prevalence of hydrophobia has drawn the attention of many to the prevention and cure of this terrible disease, as well as to its history generally. All clinical observation has hitherto only pointed to failure in attempts to cure. The communications of your various correspondents, and, *par excellence*, the thoughtful and very suggestive letter of Sir William Gull in THE LANCET of Nov. 17th, teach in the same direction. It appears pretty well ascertained, however, that the local treatment of the wound inflicted by the rabid animal exercises a very decided influence on the frequency with which hydrophobia follows inoculation. The very irregular interval that elapses between the infliction of the bite and the sudden, rapid, and almost universally fatal attack of disease would seem to indicate that decided local treatment ought to be had recourse to at a later period than has hitherto been considered advisable or necessary. The only feasible treatment, then, must be to destroy or remove the poison where it has been deposited by the teeth of the rabid animal, and the sooner this is done the better. Judging, however, from what Sir William Gull says, it would be prudent to operate on the wound, or the part which had been the site of the injury, days, or even weeks or months, after its infliction. Nothing is known of the nature of the virus of rabies; a chemical antidote is consequently beyond reach. It follows, therefore, that free excision of the wound and the surrounding parts, or the destruction of these parts by the actual cautery or very powerful caustics, constitutes the means which ought to be had recourse to for the proper treatment of wounds inflicted by rabid animals. In such circumstances, and where consequences of so grave a nature may ensue, it is a matter of much moment that such caustics be used as are trustworthy. There can be no doubt whatever about the manner in which excision and the cautery act. It is different with escharotics, more especially with the nitrate of silver, which finds a place in every list of caustics proposed for the destruction of the hydrophobic poison; and being a constant item in the surgeon's pocket-case, and this always at hand, it is probably more frequently used for this purpose than anything else. But is nitrate of silver in reality a caustic—the potent and reliable caustic such cases we are speaking of demand,—or is it only a stimulant and astringent when applied to a raw surface, and a slight vesicant when rubbed very freely on the sound skin? This salt, when applied to a recent wound or suppurating surface, forms instantaneously a thin coating of a new compound, probably albuminate of silver, which effectually prevents further penetration, and this destructive action is limited to the mere surface of the wound. Assuming this to be a correct assertion, it should follow that nitrate of silver ought to be discarded from those remedies in which trust can be reposed in a disease of such a terrible nature, and confidence only retained in excision, the actual cautery, potassa fusa, and the powerful mineral acids.

I am, Sir, yours &c.,
Kincardineshire, N.B., Nov. 20th, 1877. DAVID JOHNSTON, M.D.

To the Editor of THE LANCET.

SIR,—It is with very great diffidence that I, an outsider, venture to call in question the advisability of treatment recommended by men of such celebrity as Sir William Gull and Sir Joseph Fayrer; but inasmuch as the treatment suggested and approved by them is in part fraught with danger, I trust that I shall not be wrong in calling attention to it.

Both of these medical authorities recommend suction of the wound, which, according to Sir W. Gull, "is unattended with risk, provided there are no abrasions on the lips." Now it appears to me that the virus might be taken up if there were abrasions inside the mouth as well as on the lips; and that as there constantly are such of which we are altogether unconscious, and at any rate are very liable to forget, a recommendation to suck the wound is not unlikely to have the worst results. My special reason for pointing this out is, that I am calling attention to the result of the experience of one who particularly devoted himself to the subject, and had the amplest means of informing himself upon it during his extensive practice in cases of canine rabies. One result of Blaine's experience (see his Canine Pathology) was that inoculation in the head was certain to take effect unless treated; whereas with wounds in any other part of the body there was a considerable chance of escape. To withdraw by suction the virus-charged saliva from a wound in the hand or leg, and transfer it to a possibly abraded surface inside the mouth—in other words, to transfer the point of inoculation from a limb to the head,—would thus seem to be to leap out of the frying-pan into the fire. I may add, to show how very slight an abrasion is sufficient for the purpose, that some years ago, in the next district to me in India, the infant child of the civil surgeon died of hydrophobia, and the disease was said to have been communicated by a favourite little King Charles spaniel, which afterwards died mad, lovingly licking its nose where there was a pimple or a scratch.

Might I suggest that to well wash the wound, to score it with a lancet or penknife, and then cut it, would have much the same effect as suction, and that a small wineglass and a wooden match are tolerably efficient and always handy instruments for the purpose.

Sir W. Gull does not allude to Blaine; but I venture to point to his interesting chapter on Canine Rabies with reference to another portion of Sir William's letter. The result of Blaine's extensive practice was that efficient treatment, that is thorough excision or cauterisation, at any time before the actual development of the symptoms, was sufficient. He proceeds to state the theories suggested to account for this delayed action of the virus, but I need not enter into that here. Blaine is also quite clear on the point that there must be inoculation.

Yours faithfully,
Athenæum Club, Nov. 27th, 1877. W. M. BEAUFORT.

To the Editor of THE LANCET.

SIR,—In connexion with the subject of hydrophobia, may I be allowed to suggest the following treatment of bites, causing anxiety, as may come under the notice of the general practitioner.

Let the track of the wound or wounds be at once most carefully explored to the very bottom by means of a silver blunt-pointed probe, and the course of the wound brought as much as possible into a straight line. It must be apparent that the tooth or teeth at the instant of the "snap" (like the old spherical bullet) are deflected in their course according to the tissues, bone, tendons, or aponeuroses, with which they meet, and so the poisoned route is a crooked one on the parts recovering themselves—in fact, a closed valvular opening to the subjacent structures. It is clear that ordinary lunar caustic will not reach the depths of such a wound, even should the caustic undergo more or less dilution by the discharges at the surface. I have for some years adopted the plan of straightening the wound, and dropping nitric acid into it, stirring with the silver probe in the whole length of the wound, so as to insure that the fluid shall destroy the tissues all round it and at the bottom, poulticing afterwards in bad cases till the sloughs come away. A silver director might in large wounds take the place of the probe.

I am, Sir, yours &c.,
Chesterfield, Nov. 24th, 1877. D. MANSON, M.A., M.D.

Mr. W. B. Bigby.—The correspondence sent us is not complete, and there are some discrepancies in the statement of the facts. In these circumstances we withhold any definite judgment, and hope the parties concerned will adjust the difference.

Mr. Charles Wilson.—In a paper by Dr. Broadbent in one of the early numbers of the *Practitioner* for this year.

HOSPITAL STATISTICS.

To the Editor of THE LANCET.

SIR,—The following is a list of the major operations performed, and the results obtained, in the Newcastle-on-Tyne Infirmary during the last six months:—

Operations.	Accident or Disease.	Total.	Result.
Ovariotomy	Disease	4	1 died, 3 recovered.
Lithotomy	"	4	Recovered.
Lithotrity	"	1	"
Amputation of hip-joint	Accident	1	Died.
" thigh	Disease	3	Recovered.
" thigh	Accident	5	"
" knee-joint	"	2	"
" leg	Disease	4	"
" leg	Accident	1	"
" foot (Chopart)	Disease	2	"
" upper arm	"	2	"
" surgical neck (humerus)	Accident	3	"
" forearm	Disease	1	"
" forearm	Accident	1	"
" wrist	"	2	"
Excision of breast	Disease	3	"
" hip-joint	"	3	2 recovered, 1 died.
" knee-joint	"	2	1 recovered, in the other the leg was afterwards amputated.
" upper jaw	"	1	Recovered.
" large varicose veins	"	1	"
" uterus with fibroid tumour	"	1	Died.
" angle and ramus of lower jaw, with ligature of common carotid artery	"	1	"
Ligature of external iliac artery	"	1	Recovered.
Perineal section	Accident	1	"
Abdominal section	"	1	Died.
Comp. fractures treated, of thigh	Accident	2	Recovered.
" " leg	"	4	3 recovered; 1 died, aged 76.
" " arm	"	2	Recovered.

In the four cases of ovariotomy the pedicle was tied with carbolised and waxed whipcord, and then dropped into the belly. The fatal case died eight days after the operation from enteritis; the wound had healed by almost first intention. With the exception of the cases of lithotrity, lithotomy, perineal section, and the excision of the jaw, Lister's antiseptic treatment was strictly followed; secondary hæmorrhage after the application of the catgut ligature was markedly frequent. Thirty-two major amputations were performed, with only one death, that one case being a primary amputation at the hip-joint, death ensuing four hours afterwards from shock. The fatal result in one of the excisions of the hip-joint was due to extensive

bladder disease; the patient was fifty-two years of age. The abdominal section was performed for a large suppurating hydatid cyst, reaching from the liver right down into the pelvis. The tumour before operation was diagnosed as ovarian. The patient refused to be tapped previously.

Yours truly,
J. D. DIXON, M.R.C.S. Eng.,
Nov. 6th, 1877. House-Surgeon.

To the Editor of THE LANCET.

SIR,—I send an account of the work performed in the Azamgarh Sudder Dispensary during the month of August, 1877. It is interesting as showing the amount of work which can be done in a small station, and also the success which attends operations on the eye in this country. The operations may be tabulated shortly thus:—

	No. of Operations.	Cured.	Relieved.	Unsuccessful.	Died.
Cataract extraction	70	50	11	9	...
Artificial pupil for central opacity	23	16	4	3	...
Iridectomy for glaucoma	1	...	1	...	...
Total excision of the eyeball for staphyloma	3	3	...	...	...
Puncture of globe for sp eading ulcer ...	4	4	...	...	...
Removal of scirrhus cancer of breast ...	2	2	...	...	...
Amputations	2	2	...	...	...
Lateral lithotomy	1	1	...	...	...
Perineal section	1	1	...	...	...
Removal of cystic tumour	1	1	...	...	...
Dislocation reduced	1	1	...	...	...
Paracentesis of abdomen	1	...	...	...	1
Total	110	81	16	12	1

All the operations for extraction of cataract were performed by the method recommended in Brudenell Carter's work on Diseases of the Eye. No selection of cases was made, but all who came who had any perception of light were operated on. Better results, doubtless, might be obtained by careful selection, and also by preliminary treatment in debilitated cases; but my experience is this, that no native of this country will remain in hospital to undergo treatment preliminary to an operation. I have tried it with many, but all have vanished during the night. My custom now is to put every case at once—I make absolutely no exception—on the operating-table, and since I have done so the work has increased 500 per cent. None of the cases of cataract were classed as cured unless they could with a lens see to read, or, if unable to read, could distinguish small objects at some distance. Those whose vision was indistinct were classed as "relieved," and those who had mere perception of light were returned as "unsuccessful."

The success of the artificial-pupil operations was in some cases most marked. Men who had mere perception of light on account of central opacity recovered nearly normal vision.

Of the 9 unsuccessful cases, 2 suffered from suppuration of the globe, and 7 from effusion of lymph. These cases all left the hospital, refusing to remain to undergo treatment. In 3 of the cases a satisfactory result would have been obtained. To show that these numbers are not merely the result of a number of people coming in one month, I may mention that in July I had 80 cases, and this month, up to the 24th, I have had 109 cases of major operation, including one ovariotomy (which has recovered), and four successful stone cases.

Most of the cases of cataract in this country are treated by "satins" or "jarrahs," who use a very rough instrument, and couch the cataract. A small incision is made with a lance at the lower part of the cornea; a small wooden spoon is inserted, and the cataract forcibly depressed. In some cases the result is good; but the usual result is that the unfortunate patient, after three weeks' imperfect vision, becomes absolutely blind. It takes some time to gain the confidence of the natives; but when once obtained, it is implicit; they will come from any distance, and allow you to do just what you please in the way of operation without a word. The field for ophthalmic practice is boundless. At present I am compelled to limit my work for want of room. That and exhaustion are the only limits to the work which might be done, not only in this dispensary, but in every dispensary in India. The good results of these cases are in great measure due to the careful manner the after-treatment was carried out by Babu Beliair Lall, the assistant-surgeon.

I am, Sir, yours &c.,
B. C. SANDERS,
Azamgarh, N.W.P., India, Sept. 24th, 1877. Civil Surgeon.

EXTRACTUM CARNIS.

WE gather from a consular report that the establishments on the River Uruguay for making extract of meat are now in the fullest activity. Liebig's extract works in one year exported 16,500 tons of animal produce, shipped in thirty-five vessels, representing a value of 2,000,000 dollars. The skins and offal of the animals slaughtered are utilised and converted into money.

O. W.—Marked for insertion.

HYSTERICAL ANÆSTHESIA.

To the Editor of THE LANCET.

SIR,—Dr. Sidney Coupland's paper in your issue of Nov. 3rd, with reference to some remarks made by Mr. Brudenell Carter on the subject of hysteria (THE LANCET, Nov. 17th), is well worthy of perusal.

There are two grave dangers to apprehend from any disparagement to the study of hysterical phenomena. There is, first of all, the impetus given to treat all such manifestations as unworthy of notice, an impulse which is already far too powerful. Nothing can be more unfortunate than to impress the medical mind, already very sceptical in numerous instances, with the fact that hysterical cases may be dismissed without any further consideration. It must be remembered that such cases are very troublesome, often being a thorn in the side of the general practitioner, leading to much annoyance and very little credit, if he escapes actual discredit. Such a frame of mind as indicated by Mr. Carter can but lead to carelessness, and dismissal of cases which present anomalous symptoms as hysterical without that careful and thorough examination which all such cases demand. The second danger is found in the fact that purely hysterical symptoms often precede serious and fatal organic disease. If such patients on stating their case are to be treated as exhibiting symptoms unworthy of study, it is dreadful to contemplate the amount of injustice and suffering such will be exposed to, and that at the hands of those who are bound to do otherwise by accepting the calling of a medical man.

When such words fall from so justly distinguished an authority as Mr. Carter, they carry with them immense weight, especially when there is already in our ranks so strong a tendency to follow out this course with reference to symptoms we cannot understand, and which seem to be unconnected with any other phenomena.

It is impossible, on the other hand, not to feel that in some cases immense harm is done by showing sympathy. One such case now comes to my mind, of a woman who for seventeen or eighteen years has done nothing at all, remains with eyes shut, declaring she is unable to open them, declares she has paralysis, and cannot move in bed, although when removed from her friends, and subjected to discipline, she is as well able as others to do these things. Ladies minister to her wants, supply her with rich food and substantial shelter, and so make her life an easy one, with no incentive to action, and finding sympathy and the good things of this world in fair abundance, she is quite content to remain so.

It would much conduce to the understanding of hysteria if cases were carefully separated, and it was recognised that the best treatment consists in moral discipline, in giving some real interest in life, some powerful motive to action. I quite agree that sympathy is the worst possible thing for such cases; but it need not therefore lead us to be unjust. There is a great want of moral sense in these cases, as shown by extreme untruthfulness and prevarication, inability to judge conduct by a right standard, insensibility to the claims of others, and an inordinate sense of personal sensations.

The efficacy of me allic applications, as recorded by Dr. Thompson, does seem to carry us back to times which one hoped were buried in the past, and seems utterly opposed to scientific thought, yet if well corroborated must be provisionally accepted and worked out by patient research. The danger which seems apparent is that if such remedies are established we must open the doors to mesmerism, spiritualism, or any other of the many "isms" which now claim attention. This fact does somewhat appear to the uninitiated to justify Mr. Carter's remarks.

I am, Sir, yours obediently,
Colchester. M. G. BRUCE.

J. D.—It is difficult to name the *best* works on a pretended system of medicine which is irrational in principle and absurd or false, to itself, in practice. Homœopathy is a shortsighted heresy, confounding the natural law of "circular" action with the inference embodied in an empirical formula, *similia similibus curantur*.

A M.D. and M.R.C.S.L. is clearly entitled to describe himself as "physician and surgeon" if he so pleases.

"SANITARY WORK AT CAMBORNE."

To the Editor of THE LANCET.

SIR,—My attention has been recently called to an article in your issue of October 6th, page 510, which is headed "Sanitary Work at Camborne," in which the writer, along with other remarks, says, "The supply of a drinking-water sufficient in quantity and pure in quality is a difficult problem at Camborne, but must soon be attacked." This statement, Sir, has evidently been made by a person very little acquainted with Camborne, and has no foundation in fact, as the town and neighbourhood have, since the beginning of the year 1871, been *abundantly* supplied by the Camborne Water Company; and, as regards quality, the supply is obtained from the granite hills of Crowan, about four and a half miles distant, and has been well reported of by Mr. S. Smith, C.E., the Government inspector, who about three years since visited the reservoir and source of supply, with other gentlemen, who at that time were on a Royal Commission for that purpose. The samples (five) then taken, I have been informed, ranked with the third in quality in the United Kingdom.

I am, Sir, yours truly,
Camborne Water Company's Offices, J. T. RODDA, Secretary.
Camborne, Nov. 27th, 1877.

ERRATUM.—In the eighth line of the article on "Tame Stag Hunting," page 779, for "unearthed," read *uncarted*.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir Jas. Paget, London; Sir G. Burrows, London; Dr. Gowers, London; Mr. T. W. Nunn, London; Mr. R. Brudenell Carter, London; Dr. A. L. Galabin, London; Mr. G. Critchett, London; Dr. Sharkey, London; Dr. G. Johnson, London; Mr. W. S. Savory, London; Dr. Pavy, London; Mr. C. Macnamara, London; Mr. W. W. Wagstaffe, London; Dr. E. H. Greenhow, London; Mr. Morrant Baker, London; Dr. J. Pollock, London; Dr. C. H. Fagge, London; Dr. Andrew Clark, London; Dr. F. de Havilland Hall, London; Mr. Erichsen, London; Dr. Grailly Hewitt, London; Mr. C. Holthouse, London; Mr. C. Heath, London; Mr. S. Jones, London; Mr. J. Wood, London; Mr. R. Barwell, London; Dr. G. V. Poore, London; Dr. R. Cory, London; Dr. S. Ringer, London; Dr. Dalby, London; Mr. Field, London; Dr. Palfrey, London; Mr. H. Walton, London; Mr. E. Bellamy, London; Mr. C. F. Maunder, London; Dr. A. W. Edis, London; Dr. R. King, London; Mr. T. Smith, London; Dr. F. Hird, London; Dr. L. Brunton, London; Dr. Golding Bird, London; Mr. T. Bryant, London; Mr. E. Owen, London; Dr. J. Cavafy, London; Dr. Herbert W. Page, London; Dr. R. Southey, London; Mr. J. E. Adams, London; Dr. C. H. Jones, London; Mr. J. Farquharson, Stockton-on-Tees; Mr. C. Whipple, Plymouth; Mr. P. A. Sullivan, Carlisle; Mr. J. A. Hedges, Leighton Buzzard; Dr. G. Scott, Southampton; Dr. T. Fairbank, Windsor; Dr. E. T. Wilson, Cheltenham; Dr. H. H. Phillips, Reading; Dr. H. R. Crocker, London; Mr. H. G. Howse, London; Mr. R. H. Coombs, Bedford; Dr. S. Fenwick, London; Dr. R. D. Powell, London; Mr. Morris, London; Mr. Morgan,

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Southampton Times, Hornet, Colonies and India, Western Daily Mercury, Coventry Herald, Nottingham Daily Guardian, Financial Reformer, Accrington Times, West Briton Advertiser, Sidmouth Journal, Animal World, Weekly Hampshire Independent, Bristol Daily Post, Derbyshire Times, Preston Guardian, Staffordshire Daily Sentinel, Glasgow Herald, Derbyshire Times, &c., have been received.

METEOROLOGICAL READINGS

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, DEC. 6TH, 1877.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Wet Bulb.	Dry Bulb	Solar Radia. in Vacuo	Max. Temp. Shade	Min. Temp.	Rainfall.	Remarks at 8.30 A.M.
Nov. 30	29·05	W.	42	43	...	48	40	0·19	Overcast
Dec. 1	29·21	W.	43	44	...	49	41	0·04	Raining
" 2	29·88	E.	42	44	...	49	37	0·11	Cloudy
" 3	30·19	E.	45	46	...	49	41	...	Overcast
" 4	30·01	N.E.	44	45	...	47	43	0·04	Overcast
" 5	30·00	N.	42	44	...	46	41	...	Overcast
" 6	29·53	S.	45	45	...	54	41	...	Overcast

Medical Diary for the ensuing Week.

Monday, Dec. 10.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
ST. MARK'S HOSPITAL.—Operations, 9 A.M. and 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
MEDICAL SOCIETY OF LONDON.—8½ P.M. Dr. Lauder Brunton, "On the Absorption of Fat, and its Uses; with some remarks on Fatty Degeneration."

Tuesday, Dec. 11.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
ANTHROPOLOGICAL INSTITUTE OF GREAT BRITAIN AND IRELAND.—8 P.M.
ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8½ P.M. Dr. Joseph Coats, of Glasgow, "On the Pathology of Tetanus and Hydrophobia."

Wednesday, Dec. 12.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
KING'S COLLEGE HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.
LONDON HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.
HUNTERIAN SOCIETY.—7½ P.M. Council.—8 P.M. Adjourned Discussion on Mr. C. H. Golding Bird's paper, "On Sayre's Apparatus for Spinal Curvature, and further remarks on the Treatment of Strumous Glands by Electrolysis."
EPIDEMIOLOGICAL SOCIETY.—8½ P.M. Dr. Collie, "On Variolæ Anomalæ (Sydenham), with Suggestions and Reflections."

Thursday, Dec. 13.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

Friday, Dec. 14.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, Dec. 15.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

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